The Cavendish Lecture

ON THE

RELATIONS BETWEEN DISEASE AND REGULATING NERVOUS CENTRES.

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Πάθει μάθος.

GENTLEMEN,—The choice of a subject for such an occasion as this is no easy matter. After much hesitation I determined to lay before you some views—rash speculations, if you like to call them so—which have long interested me as to the influence of certain physiological arrangements on the causation and development of disease; and I do so in the hope that some of you, out of the fulness of your knowledge, will be able to correct or confirm them. The subject, also, is one which has a direct bearing upon our daily work.

Modern investigations have very largely modified our views as to the causation of diseases. Some diseases which a short while ago were looked upon as intrinsic, diathetic, or constitutional—e.g., tuberculosis—have been shown to be due to a specific exciting cause, and with regard to many others it is certain that great as must be the difficulties of actually demonstrating their exciting causes, they also will sooner or later be proved to be infective, extrinsic. Again, so-called predisposing causes—i.e., the modifications of structure, composition, and function which render the organism susceptible of disease—are in like manner naturally, and to a great extent justly, held to be themselves due to external causes. Thus it comes about that although we no longer look upon pathological processes as something different in kind from physiological processes, still, so far as causation is concerned, disease is generally looked upon as a something which comes to us from without. The exciting external cause may be so powerful that the most healthy organism is unable to resist it, or it may be that it must be aided by predisposing causes—i.e., that it can produce no effect unless there exist some bias, some taint, some weakness, which in its turn has been brought about by the agency of external influences. Thus, in fact, all disease begins mediately or immediately in the environment. As an abstract proposition this is undeniably true. Both physiological structure and function and pathological structure and function are ultimately due in large measure to the external conditions under which the organism exists; change those conditions, and neither structure nor function would be exactly what they are. Indeed, so far as my present object is concerned, I have no objection to make to the still stronger statement which you will find on page 332 of Dr. Harry Campbell's recently published learned work upon the causation of disease. "The environment," he says, "is in the last resort the sole cause of disease. This will be clear if we keep before us the formula—Structure + Environment = Disease. If it can be shown that structure is the outcome of structural modification wrought through the environment, then it becomes obvious that structure + environment, or disease, is produced by the environment, and by the environment alone." But it is not true, if it be held to imply that the normally healthy body will remain healthy if it do not meet with some special (not necessarily specific) injurious surroundings, that the normal body in a normal environment will remain healthy, the chief exception being that the normal degenerative changes of old age may make our bodies unable to resist certain external influences which in our period of vigour may have been actually beneficial to us—e.g., exposure to cold.

Now it seems to be worth while to inquire whether this theory of the external origin of diseases may not be, has not been, pushed too far. In opposition to it I shall endeavour to prove that normal physiological action, however perfect,—nay, perhaps because it is perfect,—may be the starting-point, the exciting cause of disease, independently of any directly injurious external factor whatever. And, again, that physiological action, so far from neutralising, in many cases aids and intensifies pathological action. In fact, he who wrote "I bring to life, I bring to death," "I care for nothing, all shall go," had at least as true an insight into the workings of nature as those who talk of the *vis medicatrix naturæ*. Were the learned designer of Hygeia himself perpetual dictator of that happy city, deaths from disease would still occur within her walls.

In the arrangements of the outer world one cannot fail to notice—as, indeed, man has always done, and has openly recognised by the use of such common phrases as to conquer, to subdue nature—a curious imperfection, and a perverse inadequacy to human requirements. Nature makes lavish promises of ease and comfort, but, if left to herself, rarely, if ever, fulfils them. The woes of him who inhabits the handiwork of the modern jerry builder must have been more than equalled in the experience of pre-historic cave man. In one of his novels, "The Toilers of the Sea," Victor Hugo discourses eloquently upon the evidences in nature, not of design, but of imperfect execution. Our unfortunate ancestors sought in their caves a refuge from the elements; their distorted bones and those of their dangerous rivals, the gigantic extinct carnivora, prove to this day that they found them veritable caves of the winds, with a constant, but uncontrollable, water service. In one chamber Nature supplies the cave-dweller with a perfect bath-room, if only the floor would hold water; in another, with a soft bed of moss, which can only be used as a wet-pack. Or, again, she constructs the semblance of an easy chair, in which, from its hardness and inequalities, ease is impossible. The same perverse inconsequence defaces also some of the very highest of man's achievements. "*Summum jus summa injuria*" neatly expresses the same fault in the operation of human law which exists in that of the laws of Nature. Surely the history of civilisation, of human progress, is but the tale of man's efforts—too often fruitless—to remedy the defects of Nature and of his own organisation, physical and moral.

Now these disappointing, these perplexing shortcomings—I had almost said practical jokes—of Nature are found, I believe, in some at least of the physiological arrangements of perfectly healthy living creatures; and here, as elsewhere, they may, and do, lead to serious results. Before, however, entering on my main argument, it is necessary to define as accurately as I can the precise sense in which certain terms will be employed in it. What is the meaning of a perfect organ, a perfect organism, of perfection, of health, and of perfect health? If these terms be taken—as they very commonly, though unconsciously, are—to mean ideally perfect, ideal perfection, ideal health, I have propounded, not a paradox, but utter nonsense, in stating that the first beginning of disease may arise in a perfectly healthy organism *without* any external morbific impulse, or even that morbid processes started by external agents may be intensified and rendered fatal to itself by the purely physiological reactions of such an organism. The ideal of a perfectly healthy organism could not well be less than this—viz., that it is one in which, once arrived at its perfect stature, the waste of tissue consequent upon vital action would be so exactly replaced in kind, quantity, and distribution, that its several parts and their relations to each other would remain unaltered, would not undergo the changes which mere lapse of time now brings with it. Such an organism would be proof against all outside injurious influences, short of actual chemical or mechanical violence, and would also be capable of accommodating itself to ranges of climate and of weather far more extensive than any to which our bodies, in their present state, could be exposed with impunity. Woe betide any pestilent micro-organism which ventured within reach of ideally *perfect* leucocytes. Of the existence of such ideal perfection in man or animal we have no knowledge. We call a living being perfect in its kind, or perfectly healthy, when it comes up to the standard determined by anatomy and physiology as a matter of fact. Of organs and organisms, then, in their present known condition, and in that alone, I state that their very perfection—i.e., their conformity to the highest ascertained anatomical and physiological standards—may prove in-

jurious to themselves. If anyone is even yet disposed to look upon my thesis as absurd, his objection may be, in part at least, removed by an addition which I am now prepared to make to the title of my lecture, which would then stand thus: "On the relation between disease and the regulating nervous centres as a proof of the imperfection of the present stage of man's development."

I have limited myself to the consideration of some of the inconveniences resulting from the statutory perfection (if I may use such an expression) of the regulating nerve centres, because to attempt to enumerate and put in evidence all the instances of imperfect execution in the mechanism and dynamics of the human body would require a wealth of knowledge, a keenness of observation, a power of reasoning, and a length of life for which I cannot hope. Again, in these centres, probably the latest, and perhaps because they are the latest, additions to our framework, we find the most striking instances, the most telling illustrations, of Nature's waywardness, of her "'prentice hand"—indeed, just that class of facts essential to an argument which I am to-day compelled to treat by illustration rather than by strict induction.

Exception might be taken to the use of the term "nervous centres." It might be said that this involves at least two assumptions which are not yet proven—viz., that regulating mechanisms are "centres," and that they are "nervous." For thirty-five years ago Claude Bernard pointed out that in the case of excrementitious products, such as urea, and even of substances foreign to the organism, such as iodide of potassium and yellow prussiate of potash, there is, as a rule, some one organ or other specially adapted for their elimination. So long as they are present in small quantities only, they pass out through this channel alone; but if their percentage rises to a certain figure, as a consequence either of increased production or of a larger quantity being introduced from without, and especially if at the same time their natural exit be in any way interfered with, then with each successive rise in their percentage other organs, either of excretion or even of secretion, join in the task of removing them from the blood, and themselves suffer more or less severely in the process. Now all this might be done without any nearer approach to a nervous centre than is to be found in the common gas apparatus for maintaining fluids or an air chamber at a given temperature, in spite of external variations. It cannot be denied that the regulation of temperature, or of intra-vascular pressure, or of the composition of the fluids of the living body, might be effected in some such automatic fashion; but, in point of fact, we now know that it is not so, at any rate in the majority of cases. Granted, however, that this "overflow" theory were true, my thesis would undoubtedly be furnished with yet stronger proofs than it has at present; for, judging from the result of the possible application of this method—e.g., in the case of urea—its practical working would seem to be less satisfactory than even that of "nervous centres.

The difference between the rudest canoe of the lowest savage capable of making one at all and a modern war-ship is not so great as that between the lowest forms of life and ourselves. With each differentiation of function, with each advance in structural development, regulating centres become more and more necessary, and, like the parts which they have to control, like the balance which they have to maintain, become more and more complicated. Their action is required by the ever-multiplying needs of the organism in two directions, easy enough to distinguish in idea, but very difficult to separate by any hard-and-fast line. On the one hand, they have to coördinate the action of highly complex groupings of muscles, so that each individual muscle may contribute its exact quota to the required result—i.e., to a movement of given force, velocity, direction, and extent. On the other hand, they have to maintain, and that in some respects within very narrow limits, the "internal climate"—i.e., the temperature, the pressure, the relations, chemical and physical, of gases, fluids, and solids, essential to the activity and even to the life of the sharply differentiated tissues; and this internal climate, be it remembered, is affected more or less by every act of the organism and by every external impulse to which it is subjected. The consequences of failure in this duty are sometimes directly fatal—e.g., the death, more or less sudden, which often follows upon shock to the nervous system. Its performance requires the harmonious co-operation of striped and unstriped muscles, and also of all processes of nutrition, secretion, and of excretion. Thus the connexion of the regulating centres with the different parts of the organism through both afferent and efferent nerves must be most intimate, most complex; and to this very complexity we shall see that some of their chief imperfections are owing.

The scope of my present undertaking requires me to pass on one side all cases of disordered function which are clearly preceded by organic changes, due to disease, in the nervous centres themselves, whatever the starting-point of these changes may be—i.e., defects in quality or in quantity of blood-supply, or processes of inflammation and degeneration, acute or chronic, or pressure by new growths, or by effusions, &c. My argument must rest on those cases only where it is certain, or at least highly probable, that injury to the organism, more or less severe, begins in the normal action, within physiological limits, of central mechanisms. From one point of view which I have ventured to suggest—viz., that of incomplete evolution—it is interesting to observe the great comparative frequency with which defects occur in the central mechanism necessary for the production of articulate speech—one of the latest, if not the last, acquired of human faculties. It would seem as if a sufficient number of years or of generations had not yet passed for its complete evolution, for its full establishment as a definite factor in our nervous system. In a large number of instances stammering is not even hereditary; it presents itself rather as a "reversion" on the part of individuals of the species than as a result of special acquired tendencies on the part of their parents. It has been compared to scrivener's palsy, but, from my present point of view, I venture to think, unjustly so, for the clinical history of the two affections is, as a rule, very different. The latter is associated with overwork of certain groups of muscles and of certain coördinating nervous centres with much greater frequency than is the case with stammering—at any rate, when this begins early in life; and, further, evidences of organic change in nerves, if not in muscles, such as pain and tenderness of nerve trunks, are common in the palsy, but unknown or very rare in stammering. The term "functional impotence" may be loosely applied to both, but in stammering the impotence would seem to be often the result of insufficient development; in writer's cramp it follows upon over-fatigue.

Many of you will remember the chapter in Sir James Paget's "Clinical Lectures and Essays," where he compares speech stammering with "functional discord" of the muscles which take part in deglutition, micturition, and defecation. In connexion with all these, difficulties from time to time occur, apparently from imperfect coördination, without anything being present which can rightly be called disease, but the result of this imperfect coördination is sometimes death. Again, the watchful irritability of the larynx, and the ready action of the mechanism by which it is closed against the passage of foreign bodies, are, beyond doubt, of the greatest importance to our well-being. There is no need, before this audience, to dilate upon the necessity for such a safeguard to the lungs. But this same apparatus is not unfrequently called into equally effective action under circumstances which render such action dangerous in the highest degree. None of you, I trust, will ever feel the very disagreeable series of sensations which attend the passage of a foreign body, even of moderate size, through the larynx. That experience happened to myself some three years ago, and I have not yet forgotten it. What struck me most, at the time and since, was the intense spasm excited by the irritation below the glottis, such spasm being of course worse than useless, and serving only to render the removal of the cause of the irritation extremely difficult. Then and there I came to the conclusion that the controlling centre of the laryngeal movements was, in my own case at least, sadly wanting in discrimination, and that it would be greatly improved were its arrangements so far modified that irritation in the lower part of the larynx should lead to widening and not to narrowing of the passage. It seemed to me that only by a great effort was I able to prevent the complete closure of the glottis, and that in doing this I was controlling, indeed reversing, the course which Nature, left to herself, would have followed—not to my advantage. In some cases of disease it is of great importance to recognise this misplaced irritability of the larynx. In young children suffering from bronchitis laryngeal spasm is sometimes almost as severe as in membranous laryngitis, and I have

seen great relief follow the performance of tracheotomy. It may be said that in these cases there is acute laryngitis as well as bronchitis, and that the former is the cause of the spasm. This may be true in some, but is certainly not true in all. Granted, however, that it were so, it seems to me that reflex spasmodic closure of a passage necessary to life, which has already been dangerously narrowed by the swollen state of its mucous membrane, is not an ideally perfect arrangement: and yet the more acute the sensibility of the parts, the nearer the nervous mechanism approaches the existing physiological standard; and the more readily it reacts to its natural stimulus, the more certainly is this brought about. I think it can scarcely be denied that if the sensory relations of the laryngeal mechanism were less extensive, if spasm of the glottis were not induced by irritation below as well as above the rima, we might still enjoy the benefits of the present arrangement, and yet escape some of its inconveniences and dangers. It might be objected that if this were the case we should not be able to cough—that, in fact, this irritability of the larynx below the glottis, and probably of the bronchi, and even of the air vesicles, does not prevent, but aids, the expulsion of foreign bodies or of harmful excretions which may have found their way into them. But surely in this objection the fact is ignored that coughing can be performed, and most perfectly, by a simple exertion of the will, and without the stimulus of any local irritation whatever. For my own part, I have no objection to coughing being done away with altogether; but what happened to myself, when that ginger lozenge went the wrong way, was this. The larynx promptly took the first step necessary in coughing—viz., contraction of the rima glottidis,—but showed no intention of taking the further and, as it seemed to me, still more necessary step of throwing it open. My instinctive wish at the time was, not to cough, but to inspire, and that was made all but impossible by the persistent spasm. Success depended upon my overcoming the obstinate resistance of the larynx to the entry even of the air, without which coughing was quite out of the question. In the same way the difficulty with children suffering from bronchitis is primarily one, not of expiration, but of inspiration. For it is this latter which becomes stridulous, and during it the lower lateral regions and the soft parts of the thoracic walls recede, and cease to do so when the trachea has been opened. In point of fact, forcible and very effective expulsive efforts are quite possible without any preliminary closure of the glottis—i.e., without any cough properly so called; and of this, everyone may convince himself by making a sudden violent expiratory effort in the course of an ordinary expiration. Minute observation of a few bronchitic patients will convince anyone that this manœuvre is often resorted to by them, and succeeds in expelling mucus when ordinary cough has failed to do so.

Sir Benjamin Brodie, in his account of the famous case of Mr. Brunel,[1] lays great stress upon the difficulty placed by the spasm of the larynx in the way of the expulsion of heavy foreign bodies from the trachea, and advises tracheotomy, not only as providing an additional outlet, but also as a means of relaxing the spasmodic stricture of the rima glottidis. It might almost seem as if this no longer takes place when it has been rendered harmless. To quote Sir Benjamin Brodie's own words: "We made an opening some few days afterwards below the thyroid gland, but the half-sovereign was not coughed up as a cherry-stone would have been, because it was too heavy. We made some attempts to use the forceps, but found it so dangerous that we desisted. When he had recovered from the effects of this operation—in the meantime passing a probe every now and then—we again placed him on a movable platform, his back was struck with the hand, and the half-sovereign escaped from the bronchus. He could feel it rolling along the trachea till it came to the glottis, and now, instead of sticking there, it passed through, just as you could roll it through the dead body, and came out of the mouth. There was no spasm of the glottis, and the absence of it was to be attributed to the opening in the trachea, for blood came out with the half-sovereign, which had evidently passed in from the external wound, and where blood went in you may be sure that the air went in also. I apprehend the rule to be this: In all cases where a foreign body has got into the trachea you must not trust to nature, but make an opening into the trachea; and then it is very likely that if the body be light, it will be forced through the opening; or if, by its own weight, it can be made to assume a certain position, it will pass out through the glottis." To this I would add once more that accumulations of mucus below the rima are also not unfrequently the cause of laryngeal spasm. We are provided not only with the means, more or less satisfactory, of driving foreign bodies out through the larynx by a blast of air, but nature has also enabled us in the case of minute particles of matter, according to their character, sometimes to dissolve, sometimes to wash them out by flushing the air-passages with a profuse secretion of thin watery mucus; just as lacrymation is excited by chemical or mechanical irritation of the conjunctivæ, so also similar causes acting upon the tracheal or pulmonary mucous membrane produce a similar effect—viz., bronchorrhœa. And here, too, imperfect arrangements of the same kind as those which we have just been considering allow the mechanism to be set to work in such a way and under such conditions as to lead to results which, if less dangerous than spasm of the glottis, are yet highly inconvenient: e.g., I have seen profuse bronchorrhœa kept up for two or three days by the lodgment of about two-thirds of the shell of a hazel-nut in the right bronchus of a girl thirteen years old who did not even know that it had passed through the larynx. Here the offending body was insoluble, and could only have been washed out by an amount of liquid which would have rendered the patient's respiration, to say the least, difficult—as, indeed, it was. As soon as the shell was expelled through the larynx the watery secretion ceased. I do not wish to lay too much stress upon this case. The fluid may have aided in the removal of a foreign body so light as this one was, although, if it were so, the process was a clumsy one, took a long time to effect the object in view, and exposed the patient to dire discomfort and to no small danger. When, however, the flushing apparatus is set to work by irritation external to the air passages, it is difficult to believe that it does not do more harm than good. Now I have seen this happen in the case of small aneurysms pressing upon the root of the left lung, when the constant cough and the restlessness produced by the consequent dyspnœa materially, in my belief, shortened the patient's life. Here, too, as in the case of the laryngeal movements, the imperfection of the action of the regulating centre and its disagreeable results are due to its afferent nerves being distributed more widely than its efferent nerves. At any rate, one and the same physiological action, if not the sole, is far away the most prominent result of irritation conveyed from tissues so different from each other in site, structure, and function as is the mucous membrane of the bronchi from their outer walls and from the neighbouring parts. The development of the centre on the motor side has not kept pace with that on the sensory side. Impulses reach it, starting from widely separated points, and differing not less widely in meaning; yet to each and all of these it can give, and does give, but one and the same response. It might be roughly compared to an imperfectly organised postal service, which collects more letters than it can deliver correctly.

The ground covered by my subject is so large that I ought not to occupy any more of the short time at our disposal by further details of imperfections in the working of the regulating centres connected with the great function of respiration. Nor shall I do so, except by stating briefly and dogmatically certain points relating to spasmodic asthma. In a hereditary case there may be no history, no sign or symptom of disease other than the phenomena of the asthmatic attacks; and these are not, strictly speaking, pathological. The asthmatic paroxysm is a physiological act which, under certain conditions and within certain limits, is most salutary to the organism. The centre from which it proceeds supplements the office of the larynx in guarding the lungs from harmful influences. It commands an inner line of sentries, so to speak, by which noxious gases, and perhaps minute foreign bodies which have passed the larynx, may yet be prevented from reaching the air vesicles. Whether this be done by contraction of the muscular elements in the walls of the bronchi or by œdema of their mucous membrane makes no difference to my argument. Of course I do not assert that the nervous system of an asthmatic conforms in all respects to the normal type, but it often differs from that type, not in being the seat of pathological changes in the ordinary sense of the word, but in virtue of under-development, if not, indeed, of over-

[1] Works, vol. iii., p. 532.

development. For the mechanism, if looked at from the afferent side, is too perfect, too sensitive; whilst on the efferent side it is deficient in the very necessary power of relaxing in due time the spasm which it has determined. The slightest stimulus—nay, even an idea—suffices to rouse it into strenuous action, action more injurious by its pertinacity than the danger (if it be a danger) against which it is directed, and the frequent repetition of which too often brings about at last fatal changes in the heart and lungs. Again, like the other centres we have mentioned, its sensory connexions are too wide. It receives impressions from the stomach, from the pelvic organs, from the bloodvessels—indeed, from almost every part of the body; and to all it gives but one answer—a fit of asthma.

My next illustration is taken from the operation of the thermotaxic centre. What are rigors? How are they produced? Do they influence for good or for evil the course and issue of the many serious diseases in which they figure among the earliest and most prominent symptoms? I have put the last of these questions to several of my friends, and when an answer was given (I did not always succeed in getting an answer), it rarely amounted to more than this—that the violence and duration of initial rigors are of great value in prognosis. This does not, however, carry us very far; and although, perhaps, from the *vis medicatrix naturæ* standpoint, it is not the worst answer which might be given, still it is a curiosity in teleology which might well be bracketed with the ingenious suggestion that the development of certain species of tapeworm is the final cause of the existence of man. There is, indeed, another answer—a very old one—which it is necessary to discuss, if for no other reason, then for this, that it was endorsed by Dr. Hilton Fagge.[2] Given, it is said, a case of fever, then the high temperature which rigors aid in producing is of essential service to the patient by removing, in some way or other, the cause of the fever, whatever it may be; burning it off, in fact. Dr. Fagge points out that the discovery of micro-organisms as the exciting and sustaining cause of many febrile diseases, has made it easier to understand how this may be accomplished. Briefly, the high temperature sterilises the blood and tissues just as it does the tube and its contents in the physiological laboratory. Now I am quite ready to give full weight to this theory, because I know that "hyperpyrexia," when it occurs in rheumatic fever, does seem to cut short that disease. Certainly in the cases which I have myself seen, the patients who recovered from the hyperpyrexia were, at its close, entirely free from the well-marked rheumatic symptoms under which they had laboured when it began. Both the joint affection and the fever had disappeared, returning only slightly, if at all, and visceral inflammations rapidly subsided. I am constrained to believe that in some way or other the disease was cured by the high temperature, or by something closely connected with it. But this single fact, and I know no other like it, is a very slight foundation for the asssertion that ordinary febrile temperatures, whether with the rigors or at any other period, have a beneficial, not to say curative, effect upon the patients. Clinical observers are all but unanimous in asserting the contrary. Surely cases of ague, of relapsing or of typhoid fever, which have the highest temperature during their first paroxysm, are not, as a rule, those least liable to relapses, or the most likely to come to an early and favourable termination. I know of no observations to prove that in the majority of infective febrile diseases, when once started, the parasites concerned in them can be destroyed by a degree of heat which is not at the same time all but fatal to their hosts. The advocates of antipyrin and of cold baths seem to think that micro-organisms and their effects are best combated and rendered harmless by a low temperature. They probably perish from the effects of their own activity, partly by using up the material necessary for their subsistence, partly by producing some poison fatal to themselves. Now some recent observations of BROWN-SÉQUARD[3] go to prove that the air expired by perfectly healthy men contains a most virulent poison (luckily for us in very small quantity) distinct from the hitherto recognised products of respiration. Thus, I may be allowed to remark incidentally, it would seem that, in the lowest organisms as in the highest, normal physiological action may lead to death.

[2] Principles and Practice of Medicine, vol. i., p. 40.

[3] Académie des Scien. Compt. Rend., Nov. 26th, 1887, Jan. 9th and 16th, 1888.

What the effect of rigors may be upon the febrile disorders in connexion with which they occur can be determined only by an appeal to facts. The typical form of rigors is that which follows exposure to cold. Here the contraction of the skin and of the superficial vessels diminishes the loss of heat which would otherwise take place, whilst the accumulation of blood in the deeper-lying vessels and in the viscera leads to increased production of heat. Thus, e.g., the ultimate effect upon a healthy subject of a cold bath is not a fall but a rise of temperature. Under these conditions rigors are one of the means by which the thermotaxic centre meets an increased demand for heat, and does so successfully, thus rendering most valuable service to the organism. But the conditions under which rigors occur in disease are totally different, and so too must be their effect. Instead of a slight fall, they are now preceded by a rise of temperature, which may be considerable. The body heat, already excessive, ought to be lowered, not raised; and yet, thanks to the thermotaxic centre, an attack of rigors supervenes, the tendency of which at such a time must be to do harm. It is sometimes urged that the sweating stage which generally follows lowers the temperature, and that it is a reaction from the rigors, which thus form, at any rate, a part, perhaps a necessary part, of a process which on the whole is a beneficial one, whatever their effect might be if they stood alone. But sweating often takes place without any precedent rigors, and would surely be more efficacious for good if it did so here. It may well be doubted whether the part played by the rigors in bringing about the sweating stage does more than counterbalance the mischief they have previously wrought—if, indeed, it does so much. Why rigors should occur with a rising temperature in disease and with a falling temperature in health is a puzzling question, which has hitherto been answered only on theoretical grounds; but it is clear that the stimulus which calls the centre into action is not always the same. It may be that a difference of temperature between the superficial and the internal parts of the body, the former being the cooler of the two, and not any absolute temperature of either, is the stimulus, or rather one of the stimuli, to which it responds. Or, in infective disease, it may be that some poison acts upon the centre, either directly, or through commencing blood change, or even through local irritation in peripheral parts. Anyhow, remembering the many and various stimuli—such as external cold, abscesses in any region of the body, the use of a catheter, the passage of a gall-stone, or thrombosis in a vein, to all and each of which an attack of rigors can scarcely be an equally suitable response,—I hold that we have here yet another instance of a centre labouring under the same infirmity as those of respiration do—viz., that its afferent nerves are too many or its efferent nerves are too few. In other words, it is as yet but imperfectly organised.

The practical conclusion to be drawn from these facts is one which, in spite of the *vis medicatrix* theory, has always recommended itself to the feelings of the sick and the common sense of their attendants—viz., that rigors in disease are injurious as well as extremely disagreeable, and, if they cannot be prevented, ought certainly to be cut short as speedily as possible. The mechanism which adjusts to the wants of the organism the quantity of fluid contained in it, and which I venture to call briefly the hydrotaxic centre, furnishes an illustration of the way in which the very perfection—i.e., the statutory perfection—of a physiological arrangement may lead to inconvenience, and even danger. The centre attains its object by coördinating the functional activities, as inlets and as outlets, of the skin, lungs, kidneys, and alimentary canal. It receives sensory impressions of two kinds. Of these, the one arises from a deficiency of fluid in the body, and of this we become conscious and call it thirst; the other is connected with the presence of fluid in excess; of this we are not conscious or only dimly so, but it serves as the stimulus to provoke the excretion of fluid by the skin, kidneys, and other sluices. It seems probable that both these sensations may originate in almost any part of the body, so that the connexions of this centre, too, are very wide. Now the excellence of a mechanism working on these lines for such an object would consist, on the one hand, in its sensitiveness to any excess or deficiency of fluid, and, on the other, in its readiness to restore the normal state of things by imbibition or by excretion, as the case might require.

In 1887 Fr. Kraus published, in Prague, the results of

two sets of observations carried out with great care, and as far as possible under similar conditions: one upon a youth aged seventeen, suffering from diabetes insipidus, or rather polyuria; the other, a control series, upon a healthy man. After being kept for some hours without any liquid, they each took the same quantity of water, and the amount of urine passed by each during several hours was ascertained. In two of the observations they took three litres of fluid at once; in three observations they took half a litre every hour. In the first case, during the first few hours the quantity of urine passed rose much more rapidly in the diabetic than in the healthy man; then, however, it fell rapidly, so that the quantity passed by each during the whole period of sixteen hours was about the same. Kraus's conclusions are that the diabetic passes a larger quantity of urine in a given time than the healthy man only when his system is saturated with liquid. He gets rid of the excess quicker, but, if the quantity excreted is not at once replaced, he does not, on the whole, pass more. He ought to be called "tachyuric," from the rapidity with which he excretes any excess; but he is not polyuric. If the fluid excreted is at once replaced by an equal quantity, he may be said to be relatively polyuric; he becomes absolutely so if he indulges his thirst and drinks large quantities of fluid. It is true that the diabetes insipidus in the subject of Kraus's experimental observations began after an epileptic fit, so that there was probably some antecedent organic change as its cause, and thus the case lies outside the limits which I have laid down for myself to-day, but it is difficult to believe that some pathological change or other exists in all polyurics from the very first. With the help of Kraus's experiments it is easy to understand how a hydrotaxic centre, highly sensitive and reacting readily to the impressions it receives, may produce a state of polydipsia and polyuria, which, if not in itself dangerous, is yet extremely inconvenient, and frequently ends in serious disease. And this may happen although at first its functional activity does not exceed the mean physiological and anatomical standard more than is the case with the special senses and the general cerebral development in many individuals, who, so far from being pitied as the subjects of disease, are envied by ordinary mortals for their great powers. It might be said that in this instance the disease clearly starts from the environment, that the quantity of liquid which the polyuric drinks—at first, it may be, unnecessarily—is the cause of his condition. But this is not the case, although it is true that if there were no liquid within reach there would be no polyuria. The true cause clearly exists, not in the environment, but in the centre itself, which by its sensitiveness and functional activity in certain individuals regulates the amount of fluid with such nicety that no margin is left for any extraordinary calls upon the activity, or even for the ordinary needs of the organism, which is thus compelled to take in an extra quantity.

With reference to the nervous nature of the hydrotaxic mechanism, it is interesting to note that antipyrin has more influence over diabetes insipidus than, perhaps, any other drug. Its good effect was well shown in the case of an otherwise healthy girl, eleven years old, who was under my care at St. Bartholomew's Hospital a few months ago. After the disease had been checked by restricting the amount of fluid as far as it could be done without disturbing the patient's general health, the use of antipyrin in doses of from ten to fifteen grains three times a day was followed by a further diminution in the quantity of urine passed, with a rise in its specific gravity, and by great relief to the thirst; at the same time she gained weight.

I wish that time had allowed me to enter into similar details as to the relation of certain motor centres to chorea, and of the vaso-motor centres to the vascular troubles which form so large a part of hysteria. But I must not now trespass on your patience longer than may suffice to formulate some conclusions suggested even by the imperfect statement just laid before you. If you cannot as yet accept these conclusions, I venture to submit to your candour that a case for inquiry has been made out, and I ask you to examine them without prejudice.

Looked at from the level of our human life, the regulating nerve centres present defects analogous to those which everyone recognises in the outer world and in man's own works. Potent for good, they are scarcely less so for evil, and in order to fit them thoroughly for man's service they require to be in some sort "broken in"—if, indeed, that be possible. These defects admit of being classified under different heads. Sometimes they seem to be caused by insufficient differentiation of structure, as when a large number of afferent nerves are in communication, doubtless through the medium of ganglionic cells, with a far smaller number of efferent nerves. And this is a state of things the existence of which seems to be established by the fact that certainly in some centres the most diverse impressions give rise to one and the same reflex act. Sometimes trouble results from the centre being too sensitive, being set in motion too readily by slight stimuli. And yet in both these cases there is often no such change of structure, no such deviation from the normal type, from the anatomical and physiological standard, as can rightly be called disease. Indeed, what from its consequences we call "over-sensitiveness," "over-readiness," is in itself a degree of development higher than the average. And it is this which places the organism at variance with the environment—this which is the first step in the development of disease. Excess of zeal is a troublesome virtue in both physical and social life. Whenever we recognise how largely ordinary physiological action enters into the processes of disease, we cease to be surprised at the rapid development of therapeutics during the last twenty-five or thirty years. The ridicule attempted to be cast upon modern methods by those who ask what conclusions can be drawn from the action of a drug upon a healthy dog, as to its effect upon a sick man, is seen to have no better foundation than their own ignorance. In the treatment of the sick we have to deal, not with vague, unknown conditions, but with physiological reactions, often differing slightly, if at all, from those of the healthy, and at first in degree only. It is no wonder, then, that the results of laboratory work are, if properly controlled, trustworthy and fruitful; that they have placed in our hands such remedies as nitrite of amyl, the salicylates, and strophanthus; that they have given fresh powers and uses to old and well-known drugs.

Without trenching on topics the discussion of which would be out of place here, I trust that you will allow me to repudiate beforehand a possible misinterpretation of the views which I have now submitted to your judgment. It might be said, from opposite sides of the question—and I might have no right to complain of any unfairness on the part of my critic if it is said,—that I have brought an indictment against the wisdom and benevolence of the Power which has fashioned our bodies. If anyone thinks that the facts support such an indictment, he has a perfect right to hold that opinion; but, for my own part, I think he would be mistaken; and if the manner in which I have stated the facts with which we have been more immediately concerned this afternoon lends any colour to such a mistake, I at once express my regret. It has been my intention and endeavour to put forward, not a theological argument, but a statement of facts which it is of great importance to us as medical practitioners to acknowledge, and which at present seem to me to be in some danger of being overlooked or neglected. The exciting cause of man's progress, of the gradual widening of the gap which separates him from the lower animals, has been the necessity laid upon him of overcoming the difficulties placed by the seeming caprice of Nature in the way of his comfort and of his desires. I see no reason to doubt that imperfections in his physical organisation such as we have been considering have also had, and will have, a similar influence upon his development. To both sets of difficulties we may apply the language of the terse Greek proverb which I have placed at the head of this lecture—"Through suffering cometh wisdom."

PHYSICAL TRAINING IN GIRLS' SCHOOLS.—At the second general meeting of the Bristol and Clifton Branch of the Teachers' Guild last week, Dr. James Stewart, B.A., in presence of a large audience, read a paper in which he advocated making it compulsory on all pupils in girls' schools, just as in boys' schools, to go into the playground and play such games as cricket, rounders, baseball, and the like. This, he urged, would be healthier than monotonous walks through streets or along country roads, and more conducive to the development of both mind and body. Girls whilst at play should wear cricketing suits made of flannel, eschewing all such abominations as corsets, to wear which whilst going through any gymnastic exercise was simply courting death, whether the wearer be woman or girl. An animated discussion ensued, in which several ladies took part.

ABSTRACT OF

The Croonian Lectures

ON THE

RELATIONSHIP BETWEEN CHEMICAL STRUCTURE AND PHYSIOLOGICAL ACTION.

Delivered at the Royal College of Physicians of London, June, 1889,

BY T. LAUDER BRUNTON, M.D., F.R.S.,

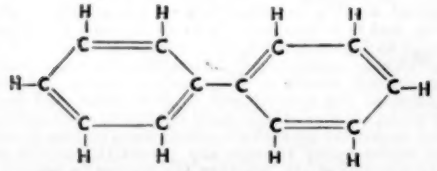
FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS; ASSISTANT PHYSICIAN AND LECTURER ON MATERIA MEDICA AT ST. BARTHOLOMEW'S HOSPITAL.

LECTURE I.

COMMENCING with an allusion to the modern substitution of artificially manufactured drugs for those formerly derived from plants and other sources, and to some of the advances in medicine, with special mention of the value of antiseptics and anæsthetics, and the introduction of many new drugs, chiefly antipyretics, analgesics, and hypnotics, which by their source and constitution are illustrative of the close connexion between chemical structure and physiological action, the lecturer proceeded to point out how the study of the viscera and grosser parts was being followed by a close investigation into the structure and function of cells, the anatomy, physiology, pathology, and pharmacology of which must be the basis of all substantial advance in our knowledge of the action of drugs.

Dr. Sheridan Delépine has made numerous observations upon the relative activity of nucleus and cell protoplasm, which indicate the nucleus as the most active, and in this, especially the network which Fleming has called "chromatin," the difference becoming more marked with age, when the surrounding protoplasm becomes converted into certain globulins, as in the case of muscle and the crystalline lens, or still more differentiated so as to be considered as practically dead. The reactions of these various parts of tissues correspond to the physiological peculiarities. By the aniline dyes two classes can be recognised—those staining with acid fuchsin and those with basic fuchsin. This selective power of cells and parts of cell may serve to explain the specific action of certain drugs, as that of strychnine upon the cells of the spinal cord, reminding us of the selective power of mercury upon gold-dust in its separation from powdered quartz by amalgam.

We know now that many diseases are due to the invasion of micro-organisms, and that the recovery or destruction of the patient depends upon the relative vital power of the microbes and the cells of his body. In the struggle it is the object of remedies to weaken the one and strengthen the other, which can only be effected by selecting such drugs as are innocuous to the human body, whilst they are as inimical as possible to the invaders. Such are the various antiseptics. Amongst the products of tissue change in low organisms have been found a number of substances which destroy these organisms, or which, in other words, are antiseptic. Such are phenol, phenyl-acetic acid, cresol, indol, phenyl-propionic acid, and skatol. Those bodies which contain a diphenyl nucleus are amongst the most powerfully antiseptic, and, at the same time, the least poisonous. The diphenyl nucleus consists of two molecules of the hypothetical phenyl C_6H_5 united by the unsatisfied affinities of two adjacent atoms of carbon—thus:



But instead of two such radicals becoming directly united, the bond of union may consist either of a carbon atom alone, of a carbon atom with one or two atoms attached, or the uniting link may consist of oxygen, nitrogen, phosphorus, or, indeed, probably of any element, the atom of which has at least two affinities, so that it is able to connect two radicals. Nitrogen is peculiar not only in its property of uniting with itself like carbon, but in behaving sometimes like a trivalent and at others like a pentavalent element. When it becomes connected with carbon in its triatomic condition, it saturates three affinities of the carbon, leaving one free ($-C\equiv N$), and compounds of this description are called nitriles. On the other hand, when nitrogen in its pentavalent condition is united with carbon, the four affinities of the latter element saturate four of nitrogen, leaving one affinity of nitrogen free ($C\equiv N-$). In both cases the free affinity may unite with hydrogen or with a radical. It is thus evident that we may have two substances having exactly the same chemical composition, RCN and NCR, but with this difference, that R, which may stand for an organic radical, is connected in the one case with an atom of nitrogen ($R-N\equiv C$), and in the other with an atom of carbon ($N\equiv C-R$). It might be considered that this difference is of no importance, and that the two bodies would be practically identical, but this is by no means the case. On the contrary, their physiological action is very different. Those bodies (nitriles) in which the nitrogen is trivalent and the radical is united to carbon are comparatively inactive, whereas those in which it is united to nitrogen are very poisonous.[1] This difference in the arrangement of the atoms is usually known as chemical constitution as distinguished from chemical composition, by which we mean the number and kind of atoms of which the substance is composed. The term "chemical structure" has been adopted in the title in order to include the alteration in the physiological action of a substance due to a simple multiplication of its parts without altering their arrangement—as, for example, the difference between the action of ethylic and amylic alcohol. These two are built on exactly the same type, and the relation of the parts is similar, but the number of these is greater in amylic than ethylic. The word "structure" may be fairly made to include the number of compound atoms in the substance as well as their relation to one another.

The lecturer continued as follows:—To make the subject of chemical constitution clearer, I may perhaps be allowed to make use of a very homely simile. I have here a pocket knife with a number of blades. At present these blades are all shut, and the knife may be given to a child to play with or carried in the pocket without the least danger. If I open one of the blades, however, the case is very different. The composition of the knife is exactly the same as before, but by altering the relation of the parts to one another I have converted a harmless plaything into a dangerous weapon. In the case just referred to, of the compound of nitrogen and carbon, an alteration in the relation of its parts has a similar effect to the opening of the knife, and converts the comparatively harmless carbylamine into the deadly cyanide or nitrile. Again, whilst keeping the same handle, I may alter the uses of the instrument by opening out a boot-hook, a gimlet, or a file, and in a similar way we may alter the functions of an organic radical, which we may compare to the haft of the knife, by attaching to it an atom of amidogen, chlorine, or hydroxyl. If I wish to cut something out of my reach, I may effect my purpose by tying my knife to a stick, or, if that should not be long enough, to another, and yet another, until the handle is sufficiently long for my purpose. Such a process as this may be compared to adding on carbon atom to carbon atom in a lengthening chain in the higher paraffins. But just as my shank would by-and-by become too cumbrous, so we find that the higher paraffins, although, from their high molecular weight, they ought to be powerful anæsthetics, are too sparingly absorbed to have any physiological action at all, and, instead of producing either intoxication or anæsthesia like marsh gas, are simply used under the name of vaseline to protect the skin. With a comparatively small number of letters we are able to form a great number of words and to represent a great number of ideas, and with a small number of elements we can form many compounds. Slight alteration in the composition of words, the introduction or abstraction of a single letter, will often completely change their meaning, and slight alterations in chemical substances will change their properties.

[1] In this statement the text-books are followed, but the subject wants investigation.

A word may retain its meaning whilst compounded with others, as may an organic radical adhere to its properties whilst in combination with other elements. By altering the arrangement of the letters, however, we produce a completely different effect; for instance, instead of "room" we get "moor"—a complete change of sense, which is paralleled by the example already mentioned of substituting R – C – N, for C – N – R. Whilst usually certain alterations and additions only modify the action of the radical to a slight extent, yet now and again we meet with quite unexpected cases where slight modifications produce an altogether unexpected effect. Thus sodium acetate has a very slight physiological action indeed; but, when one atom of hydrogen in the acetic acid is replaced by bromine, the resulting compound monobrom-acetate of soda has a most remarkable action upon the muscles of a frog, rendering them so rigid that the animal becomes as a piece of wood. Both phenol and aniline are markedly poisonous, but orthoamido-benzene is innocuous. Oxalethylin has an action like atropine on the brain, pupil, and vagus; but if one atom of hydrogen in it be replaced by chlorine, the resulting body (chloroxethylin), while still retaining its power over the vagus, no longer dilates the pupil, and acts as a soporific to the brain like morphine.

The main object of these lectures is to treat the subject in relation to the prevention, control, and cure of disease, and I propose to consider the causes of disease and the functions of the organism, and to discuss the manner in which these are effected by alterations in the chemical structure of the remedies we employ. Microbes were formerly looked upon as directly causing disease by affecting the tissues of the patient; but now, since we know something of the chemistry of putrefaction and fermentation, we regard many of the symptoms which occur as being due, not to the direct action of the organisms upon the tissues, but to their indirect effect in forming poisons. Panum in 1856 showed that the poison which occurred in putrid meat is a chemical substance, and not a living organism, although it may be formed by organisms, for he was able to boil it for eleven hours, and then to dry it completely at boiling heat without destroying its poisonous properties. And quite recently it has been shown that, in the growth of micro-organisms in gelatine, liquefaction of the medium occurs as an effect of an enzyme secreted by the organism and capable of acting after the latter has been destroyed. It appears, also, that bacteria have the power of adapting themselves to the soil on which they grow, and of manufacturing a ferment suitable to their needs, for the same bacilli, when grown in starch paste, produced a ferment which would convert starch into sugar, but would not act upon gelatine.

In discussing the relation of microbes to disease, we may consider—(1) the microbes themselves outside the body and the poisons they produce; (2) the microbes themselves and the poisons they may produce in the intestinal canal; and (3) the action of microbes or their products when actually circulating in the blood or present in the tissues.

CASE OF

COMPOUND COMMINUTED FRACTURE OF THE SKULL.

DEPRESSION OF BONE; ABSCESS IN BRAIN; OPERATION; RECOVERY.

BY JOHN H. MORGAN, F.R.C.S.,
SURGEON TO CHARING-CROSS HOSPITAL.

A HEALTHY BOY, aged nine, was admitted into the hospital at 10 A.M. on June 10th, 1888, in a state of unconsciousness, and with a scalp wound over the right parietal region in the shape of two sides of a triangle, each of which measured an inch and a half, the apex pointing inwards. He had fallen off the Thames Embankment close to the old iron pier at Charing-cross. The tide at the time being low, he had alighted in the mud, and was brought in by the Thames police, who, on searching the spot subsequently, found that he had struck his head against an old ship's timber, from which several large wooden pegs projected, one of which must have caused the wound. He was quite insensible when admitted; the pupils were equal, moderately contracted, and reacted slightly; the urine was passed unconsciously. The wound exposed the bone over a small area, but no fissure could be seen; after the edges had been cleaned, it was powdered with iodoform and covered with antiseptic dressings, which were firmly secured by a bandage. In the evening he recovered consciousness to a partial extent, recognising his parents, but sleeping at intervals, and then calling out and becoming very restless. On the following day he was in the same condition, with more restlessness, during which all the limbs were moved with equal freedom, there being no sign of paralysis. He lay generally on his left side with all the limbs flexed. He resented any examination of his eyes, but put out his tongue when ordered to do so. The temperature rose to 102·8°; the pulse was 136, regular, but weak. During the night he vomited once. He was given two grains and a half of calomel. The urine continued to be passed unconsciously. On the following day he was more sensible, but was still drowsy, and resented any examination. Temperature 101·8°; pulse 102. The wound appeared fairly healthy, but there was a slight discharge from it, which had a foul odour. He continued in a state resembling that following cerebral irritation for the next two days, no sign of paralysis being evident. But, on the night of Thursday, June 14th, he was heard to scream, and was then seized with a fit, which lasted for an hour, and remained unconscious from the beginning of the fit at 3 A.M. until 7 A.M. At this hour I saw him, and found him barely conscious, the pupils equal and dilated, the left arm perfectly paralysed, and the left leg almost entirely so. During the fit there had been convulsive twitchings of the left leg, followed by the same in the left arm, but not involving the face or the opposite side. The temperature had fallen to 99°. It was thought best to postpone any operation till later in the day. When seen again at 2 P.M. he was more conscious, but the paralysis continued. It was evident that there existed some pressure upon the motor centres of the arm and leg, and that no time should be lost in ascertaining the nature and cause of this.

After consultation with my colleagues, the boy was removed to the theatre, and I then extended the wound so as to turn back a large flap, and, on stripping the bone, there was seen at a distance of two inches from the middle line and vertically above the right ear a depressed fracture of the bone. The area of the bone depressed was less than the size of a shilling, the attached edge being outwards, and the depressed portion pointing towards the middle line of the skull. The situation was more than an inch and a half from the site of the scalp wound, and the parts actually covering it were not disturbed, whilst the portion of brain into which it had been driven corresponded to the situation of the ascending parietal convolution and its adjoining parts. The periosteum was inflamed, and was easily stripped off. Two half-crowns of the trephine were removed from the surface of the bone, internal to the depressed portion, and the depressed portion was elevated and removed with forceps. A rent was seen in the dura mater, of irregular shape, the edges of which were thickened with inflammatory lymph, and through this a quantity of thick yellow pus welled up. When the cavity from which this exuded had been cleansed and syringed with carbolic lotion (1 in 40), a hole was seen in the brain substance, into which the end of the little finger could be easily inserted. The granulations lining this cavity were thoroughly removed by means of a sharp spoon, and the edges of the tear in the dura mater were trimmed with scissors. This was then replaced, and a small drainage-tube inserted into the cavity in the brain; the periosteum was then replaced, and the edges of the wound were stitched together with silk, a second drainage-tube being brought out at the lowest point of the incision into the scalp.

The temperature on the evening following the operation rose to 102·4°. At 12.45 P.M. the boy had a slight fit, which lasted five minutes, and was said to have affected the right side of the face and the abdomen. At 2.20 A.M. another fit occurred which lasted ten minutes, affecting the right side of the face and then passing to the left hand; and a third took place at 3.40 A.M., which began in the left side of the face and left hand, passing to the right hand and right side of the abdomen, and continuing for fifteen minutes. At 9.30 A.M. a fit which lasted four minutes began on the right side. The right leg was drawn across the abdomen, and the right side of the face and fingers of the left hand were con-

vulsed. At 11 A.M. a fit commencing at the left angle of the mouth passed to the muscles on the left side of the face, and after continuing for a minute passed to the muscles of the other side of the face. The spasms were clonic, and more violent on the left side than on the right. The pupils, semi-contracted, reacted to light. Consciousness was not lost. A few minutes later clonic spasms came on in the abdominal muscles, chiefly on the left side, but affecting the right to a slight extent. The boy was at this time lying on his back in a drowsy state; but he would put out his tongue when ordered to do so, though he resented interference as he had done before the operation. He moved the left arm very slightly, and also the left leg. The prick of a pin was felt equally on the two sides; the knee-jerks were very slight on either side, though more marked on the right. Temperature 102·4°; pulse 112; respiration 24. The wound was dressed, and the scalp was found to be puffy for some distance around the wound. Tongue covered with white fur. Bowels not open. Taking food regularly. In the evening the temperature was 102·4°; pulse 136, regular, weak, compressible. At 1.45 P.M. he had a fit, only lasting a minute or two, involving the left side of the face and left arm. On June 17th, when seen at noon, there had been no recurrence of fits. He was sensible; the pupils equal, and responding to light. There were much stronger and freer movements of the left leg; those of the left arm were slight, but freer than on the previous day. He was drowsy. The pulse was less compressible and fuller; temperature 101°. The tongue was coated but moist. An enema had been followed by a free evacuation. The wound was dressed. There was less puffiness of the scalp, the granulations were healthy, there was less discharge, and the pus was healthy and free from smell. On the 18th the patient, though still inclined to sleep, was quite sensible when roused, but irritable, and when left alone lapsed into a drowsy condition. When asked, he said that he had pain in the head, and pointed to the site of the wound. There was freer movement of both left arm and leg. The pupils were dilated. Temperature 100°; pulse 108; respiration 26. He asked for the bed-pan when he wanted to pass a motion, but the urine was passed involuntarily. On the 19th he was more conscious, answered when spoken to, but was still irritable, and complained of pain in the head. He was able on this day to raise the left arm above the head, but the grasp of the hand was weak. The movements of the left leg were much stronger, and almost equal to those of the right. There had been no recurrence of fits, and he was conscious of the desire to pass urine. Temperature 98°; pulse 100; respiration 20. On the 20th he was somewhat irritable, slept a great deal, but was much more sensible in every respect. On the 21st the irritability appeared to have disappeared, and he was less drowsy. The stitches were removed, but a small drainage-tube was retained in the wound. He continued to improve during the next two days, and the wound had a most healthy appearance, though giving issue to a good deal of healthy pus. On the 25th there was a sharp rise of the temperature to 103·8°, with a pulse of 140, and he complained of pain in the head. When the bowels (which had not been open for two days) were relieved by a dose of castor oil, the temperature fell to 98°. On the 28th the appearance of the wound, which had been satisfactory, gave rise to fear lest some hernia cerebri should threaten; the granulations were exuberant and fungating, and pulsation could be observed in them. This condition subsided with the free use of iodoform, and all the other symptoms improved, the only trace of the former paralysis being noticed in the weaker grasp of the left palm. During the next few weeks the cicatrisation became firm, and on Aug. 1st the boy was walking about without any trace of paralysis, but with some slight exudation from some superficial granulations at the apex of the wound. He has remained perfectly well up to the present time (eleven months since the operation), and has no trace of weakness or loss of power in either extremity. There is a depression of the scalp at the site of the removed bone; but though pulsation is well marked, firm pressure on this region produces neither pain nor other symptom.

The case seems to present the following points of interest. 1. The distance of the position of the depressed bone from the site of the scalp wound. The absence of any lesion exposed by the wound in the scalp did not in the first instance justify its extension, and the subsequent symptoms were such as might justly be ascribed to such laceration of the brain as might be expected in a case of such severe injury. It was fortunate that the paralysis which ensued was so distinctly marked in its distribution as to point distinctly to compression of the motor area of the left arm and leg, and thus the necessity for exposing the surface of the brain in that region could not be questioned, so soon as the paralysis became evident. 2. With regard to the treatment of the abscess, the event has proved that no harm accrued from the freedom with which all granulation tissue which formed the margins of the cavity was removed, even at the expense of some healthy brain tissue. On the other hand, it may be doubted, if the contents of the cavity had been evacuated only, and the surface which surrounded them had not been removed, whether these granulations might not have become more active, and have given rise to hernia cerebri, besides involving more of the brain tissue that surrounded them. As it was, the granulations at one time became so far exuberant as to give rise to fear lest a hernia cerebri should supervene. That these yielded to the free use of so powerful an antiseptic as iodoform points to the probable cause of this condition—viz., a septic condition of the granulations,—and is indicative of a form of treatment which is much more likely to be successful than those forms of pressure which were formerly recommended. 3. The symptoms which followed the operation were not without peculiar interest. The fits that followed showed that a considerable amount of disturbance existed in the substance of both hemispheres, since the spasms were noted to effect the right side of the body and face as well as the left, although the power of movement which returned rapidly in the left arm and leg showed that the area which governs the functions of those parts regained its activity as soon as the pressure was removed.

Grosvenor-street, W.

A CASE OF COMA DUE TO CEREBRAL ABSCESS;

SUCCESSFUL EVACUATION OF THE ABSCESS BY THE TREPHINE; DEATH.

BY A. MARMADUKE SHEILD, M.B., F.R.C.S.,
ASSISTANT SURGEON, AND SURGEON IN CHARGE OF AURAL DEPARTMENT, CHARING-CROSS HOSPITAL.

THE majority of cases of cerebral abscess are secondary to caries and necrosis of the cranial bones, and especially to such affections of the petrous portion of the temporal bone The abscess will generally be found in the temporo-sphenoidal lobe, and more early in the middle lobe of the brain, or the cerebellum. These cases are usually associated with long-standing otorrhœa. They may also be complicated by meningitis and pyæmia, and thus render a difficult diagnosis still more embarrassing. In most cases, inquiry will elicit that there have been premonitory symptoms. The pains spoken of by patients, too often by doctors, as "neuralgic," are, in truth, due to chronic basal meningitis, localised to the region over the inflamed and diseased bone. The symptoms of cerebral abscess are known to be dubious and misleading in the highest degree. When the collection of pus is found in the temporo-sphenoidal lobe, the symptoms are exceedingly vague. This portion of the brain has few certain motor functions. Post-mortem examination may reveal disease in it for the first time. In a remarkable paper by Macewen,[1] two cases of abscess in the temporo-sphenoidal lobe, treated by operation, are related. The first case was unsuccessful. The patient was *in extremis* at the time of operation, and in this respect resembles the case I am about to narrate. At the necropsy, the whole lobe was found to be destroyed, and the neighbouring convolutions implicated in encephalitis. The second case was successful, and is one of the most interesting in a remarkable series, as indicating the possibility of localisation of abscess in the temporo-sphenoidal lobe by a careful process of exclusion conducted by a careful and competent observer. The details of the case about to be described are as follows.

A woman aged thirty-two was admitted into Charing-cross Hospital on Sept. 26th, 1888, in a condition of profound coma. The only history obtained of her case was to the effect that she had been under the care of a neighbouring

[1] Brit. Med Jour., Aug. 11th, 1888.

practitioner for "pains in the head," that these had lately got worse, and that since the morning she had been drowsy and stupid. On examining the right ear, pus was found in the meatus, and a foul odour was apparent on close investigation. The auditory canal being cleaned, the tympanic membrane was found to be quite destroyed, and protuberant granulations were abundant. The pupils were equal, somewhat dilated, not acting to light. There was no squinting, and optic neuritis was not looked for. The face was dusky and congested, the respiration slow and stertorous, the skin burning hot to the touch, and the temperature 104°. There were no evidences in the lungs, joints, or skin of general pyæmia; no tenderness or œdema in the mastoid region, or fulness down the course of the jugular vein. The pulse was regular and compressible, 120 to the minute. Free leeching was tried without benefit. The case was watched for about three hours. The coma was obviously deepening and the patient in a condition of impending death. About 6 P.M. I operated. The right side of the head was shaved and carefully cleansed with strong carbolic acid. A large flap, with its base downwards, was formed above and behind the auricle, the vessels being twisted. A large trephine was applied at a spot one inch above and a quarter of an inch behind the external auditory meatus. On removal of an exceedingly thin disc of bone the dura bulged strongly, did not pulsate, and no suppuration could be detected beneath it. A small trocar and cannula was now passed downwards and forwards into the substance of the temporo-sphenoidal lobe for about one inch. On withdrawing the trocar greenish pus exuded, and on enlarging the aperture with a director about half an ounce of very fetid pus escaped, mingled with broken-down cerebral débris. A tube was gently inserted into the abscess cavity, which was washed out with warm antiseptic lotions. The flap was replaced and carefully sutured, the tube being brought out through an aperture in its base, and the parts dressed antiseptically. The stertor was somewhat lessened by the operation, and slight movements of the limbs were afterwards noticed; but it may be generally said that no marked improvement resulted. The woman died at 2 A.M. on the following day. A post-mortem examination was refused.

Notwithstanding the unsatisfactory termination of this case, I have thought right to record it. In such an important surgical proceeding as trephining for cerebral abscess, it is meet and right that all cases should be related. In the absence of a post-mortem examination, we can only conjecture the cause of the failure of the operation. Meningitis, encephalitis, or the bursting of the abscess into the ventricular cavities, are possible and probable explanations. The operation was, in fact, undertaken too late, the general paralysis indicating a condition that is too rarely relieved by the trephine in cases of pressure by pus or blood.

Mr. Barker, in a paper on the subject of Ear Disease and its Cerebral Complications,[2] alludes to the comparative frequency of temporo-sphenoidal abscess, and the tolerance of that region of the brain to surgical interference. Treating of the regions affected, he speaks thus: "Nine-tenths of them (abscesses) will be found to lie within a circle with a radius of three quarters of an inch, whose centre lay one and a quarter inch above, and the same distance behind the auditory meatus." In the same paper it is pointed out, with truth, that subdural suppuration is often most difficult to certainly differentiate from abscess. But this, too, may be reached and relieved by operating in the same region, which is probably the best situation to choose. It cannot be too strongly impressed upon us all that the symptoms of cerebral abscess may be readily overlooked and misunderstood. It is only by the general symptoms of vomiting, delirium, optic neuritis, and the like that we may suspect abscess in the temporo-sphenoidal lobe; localisation symptoms are quite exceptional. Percussion of the skull might be of some use, and fixed pain, or œdema of the soft parts, are valuable guides when present.

Stratford-place, W.

[2] Ibid., June 11th, 1887.

LONGEVITY IN IRELAND.—Among the deaths recorded during the quarter ending March were nineteen centenarians. Seven were aged 100 years, one each at 101, 102, and 103, two at 104, one at 105, two at 107, one at 109, two at 110, and one at 111 years respectively.

HAY FEVER AND HAY ASTHMA.

BY F. DE HAVILLAND HALL, M.D., F.R.C.P.,
PHYSICIAN TO OUT-PATIENTS AND IN CHARGE OF THE THROAT DEPARTMENT AT THE WESTMINSTER HOSPITAL.

THE return of the hay season and the prospect of there being an unusually abundant crop this year have induced me to direct attention to hay fever, which is a subject of ever-increasing interest, more especially as with advancing civilisation it appears to be gradually becoming more prevalent. Sir Andrew Clark struck a true note when, in the Cavendish Lecture[1] he emphasised the doctrine that there are three great factors concerned in the evolution of hay fever: (1) A nervous constitution or idiosyncrasy, sometimes inherited and sometimes acquired; (2) a local condition of irritability, involving the nervous, vascular, and cellular constituents of the affected parts, and which, when excited, disturbs the chemical, morphological, and secretory changes taking place therein; (3) external, exciting, or determining causes—i. e., the agents which are capable of calling into action the irritability of the parts concerned. The first of these factors is so vague, and is so little susceptible of any direct treatment, that it will be out of place to discuss it at any length in a paper designed to be practical. As regards the third factor, there is an overwhelming weight of evidence in favour of the view that, in this country at all events, the most potent external exciting cause is the pollen of various grasses. Still, there are cases in which other irritants, such as ipecacuan, dust, or even touching certain zones of the mucous membrane of the nose, will induce a train of symptoms indistinguishable from hay fever, and, as is well known, a bright light or great heat will oftentimes start an attack in persons subject to the affection. This brings me to the consideration of the second factor, the condition of irritability of the nasal mucous membrane. In spite of what has been done in America and in Germany, the interior of the nose has received too little attention in the treatment of hay fever. Notwithstanding the extreme views to which his enthusiasm led him, there can be no doubt that Hack did good service to medicine by pointing out that changes in the interior of the nose play a prominent *rôle* in the production of symptoms in other organs, as examples of which may be cited cough, migraine, supra-orbital neuralgia, giddiness, redness and swelling of the nose, &c.; but it is in hay fever, asthma, and paroxysmal sneezing that we meet with the most pronounced examples of these reflex neuroses. The changes met with in the nose in cases of hay fever are usually of a hypertrophic character—i. e., they constitute the condition known as hypertrophic rhinitis; or they may be more limited, consisting only of a puffy swelling of the inferior turbinated bodies, or of an enlargement of the posterior extremities of the same; in some cases the middle turbinated bodies are chiefly affected, or one or more polypi may be present, or there may be some abnormal condition of the septum. In a case seen last autumn, a gentleman who had been a great sufferer for many years from hay fever ceased to be troubled as soon as a perforation in the septum occurred, thus apparently proving that the irritable zone from which the reflex started was situated on the septum. Be the local changes what they may, the paroxysm of hay fever is invariably accompanied by swelling and engorgement of the erectile tissue, which forms so important an element of the inferior turbinated body, but which is also present in other parts of the nasal mucous membrane; and following this there is an increased secretion, which is at first purely serous, but which may become muco-purulent.

In treating a case of hay fever, the three factors concerned in the production of the disease must be borne in mind. It will, therefore, be desirable in the first place to improve the general health of the individual as far as possible. There can be no doubt that in many cases the injudicious use of alcohol aggravates the severity of the disease. The depression and exhaustion produced by hay fever are oftentimes so great that the patient has recourse to stimulants to counteract these effects; but though he may experience temporary relief, in the end alcohol in any quantity only aggravates the local trouble, to say nothing of the more remote evils that may result from its use. Sir Morell

[1] Brit. Med. Jour., June 11th, 1887.

Mackenzie recommends one grain of valerianate of zinc with two grains of the compound assafœtida pill, to be taken two or three times a day. Tincture of opium in five to ten minim doses, either alone or in combination with the same quantity of the tincture of belladonna, has been highly praised. I frequently order a mixture containing from ten to twenty grains of the bromide of potassium and three minims of Fowler's solution. The bromide allays the nervous erethism met with in hay fever, while the arsenic has a tonic effect. Antipyrin, in doses of from ten to thirty grains twice a day, has recently been found very efficacious. It appears to have an anæsthetic action on the sensory and secreting nerves of the nasal fossæ. As regards the second point—the removal of the patient from the exciting cause,—this can be effected by sending him to the seaside, or, still better, for a voyage. If neither of these plans be practicable, means must be taken to exclude the pollen &c, by wearing goggles and having the nostrils plugged with carbolised wool when out of doors, or a silk gauze veil, doubled, may be worn over the face. But from my experience the measures detailed above are merely palliatives; they may render life in the summer months a little less miserable to the unfortunate sufferers from hay fever, but there is no pretence that they can effect a cure, so that with every returning June the same wearying round has to be gone through. The only plan which affords a hope of giving permanent relief is by directly treating the local condition which is the fundamental cause of hay fever. That there is in this disease a preternatural irritability of the Schneiderian membrane, which renders it liable to respond to the effect of influences that would be entirely innocuous if applied to a healthy tissue, is, I think, pretty generally admitted, and this is the explanation of how it comes to pass: that though thousands are exposed to sources of irritation, such as the pollen of certain grasses, only an exceedingly small number suffer any inconvenience. Sir Andrew Clark, in the lecture to which I have already referred, proposes to exhaust this irritability by the application of a powerful stimulant, and for this purpose he employs a mixture of one ounce of glycerine of carbolic acid, one drachm of hydrochlorate of quinine, and the one two-thousandth part of perchloride of mercury, made into a solution by the aid of heat. With this he swabs out the interior of the nose, and claims a fair measure of success for the plan. The method of treatment which has been more largely employed in America than in this country is, however, the one which commends itself to my judgment, as being at the same time based on scientific principles, and being also free from risk, and attended with but comparatively little pain. I allude to the employment of the galvano-cautery. The mucous membrane of the nose must first be rendered anæsthetic by the application of a 20 per cent. solution of the hydrochlorate of cocaine, and then the thickened tissue of the inferior or middle turbinated body, as the case may be, is to be freely and deeply scored with the galvano-caustic blade. In some cases I find it is better to use a fine point, as the deeper parts can be more thoroughly cauterised with this than with the blade. The smarting after the cauterisation may be diminished by introducing into the nostrils wool smeared with carbolised vaseline. Even a single application will sometimes effect a great change for the better, but usually several sittings are required before complete success is attained. As regards the use of a solution of cocaine applied to the nose, the expectations which were formed of its efficacy in hay fever when the drug was first introduced have not been realised. Though the immediate result of the application is to produce an alleviation of the more distressing symptoms of the disease, the effect soon passes off, and the application has to be renewed if relief is to be obtained. As a result of the dilatation of the blood-vessels, which is the secondary effect of cocaine, the mucous membrane increases in thickness, so that eventually the drug aggravates the evil it was meant to cure. Moreover, its seductive effect should not be forgotten, nor the risk of starting the cocaine habit ignored, so that I would join with Mr. Lennox Browne in deprecating the employment of cocaine in chronic diseases of the throat and nose.

Wimpole-street, W.

HALIFAX NEW INFIRMARY.—The donations or promises of donations for this object now amount to over £38,950, including a sum of £5000 from Mrs. Williams, daughter of the late Mr. Joshua Appleyard, of Halifax.

A CASE OF

ANEURYSM OF THE ASCENDING PART OF THE ARCH OF THE AORTA; RUPTURE INTO THE SUPERIOR VENA CAVA.

By RICHARD SISLEY, M.D.LOND.,
MEDICAL REGISTRAR AT ST. GEORGE'S HOSPITAL.

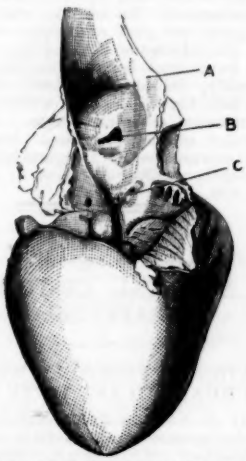
THE patient was thirty-five years of age. He had been a baker in the commissariat department of the army for some years, and lived for a time at Gibraltar, where he had "rock fever" in 1881. This was the only illness from which he had suffered, and there was no history of accident. It was not ascertained whether he had had syphilis, but he had a scar on the dorsum of his penis. This was the only evidence in favour of the hypothesis that he had had that bad disorder. The man married in 1882. His wife had had two healthy children, and no miscarriages. After leaving the army the patient worked as a baker till 1886, when he became a potman. He was, according to his wife's account, a sober man even during his year of public-house life. On Jubilee day he injured his hand, and was from that cause obliged again to change his occupation. In August, 1887, he "went on the parish," and had from that date worked as a labourer. One night in January, 1888, as he was about to go to bed, he suddenly reeled and fell down in a state of insensibility, but he immediately regained consciousness. He had no similar attack at any other time. During the winter of 1888–89 he had a cough, but did not complain of shortness of breath. His wife noticed that when he returned home from work his eyelids were puffy and his face rather swollen. This condition was only seen at night; by the morning the œdema had always disappeared. On March 14th the patient left home as usual, and it chanced that his work lay in front of St. George's Hospital. Not feeling well, he went in for advice; but he did not consider himself seriously ill, and wished to go home. His face and neck were deeply cyanosed, his eyelids puffy, and his ears almost black. His arms were slightly cyanosed. The other parts of his body were of natural colour. A double murmur was heard over the middle of his sternum. His mental state was clear, but he was drowsy. He complained of no pain, and had no paralysis.

Dr. Ewart diagnosed that the man had an aortic aneurysm, which pressed on his vena cava superior. The patient was bled to sixteen ounces. It was noticed that his cephalic and jugular veins pulsated, and that the man bled very freely. There was, indeed, a difficulty in stopping the hæmorrhage; an ordinary bandage did not suffice, and a splint was applied. The patient was not relieved by venesection. His face and arms became gradually more cyanosed, and he became more and more drowsy, and finally comatose. He died about two hours after his admission to the hospital.

At the necropsy it was found that the right side of his heart was healthy. The left ventricle was slightly hypertrophied. The aortic valves were not thickened. The aorta was atheromatous. There were no patches of calcification. In several places there were depressions measuring about a quarter of an inch in diameter. The depressed parts were puckered, and the aortic wall was thinner there than it was elsewhere. It was evident that the depressions were caused by cicatrical contraction following endoarteritis. Three-quarters of an inch above the posterior aortic valve there was a saccular aneurysm. The opening into the aorta was of rounded form, and an inch and a quarter in diameter. Beyond the opening the sac measured about an inch and a half in its transverse diameter and two inches from above downwards. The wall of the aneurysm was smooth, except where it was in contact with the walls of the vena cava and of the right auricle. The aneurysm extended between the walls of the aorta and the right ventricle as far downwards as the inter-ventricular septum, and upwards to a point three-quarters of an inch below the opening of the innominate artery. About the centre of the right posterior part of the aneurysm there was an opening into the vena cava immediately above the entrance of that vessel into the right auricle. The opening was of irregular form; its edges were ragged and thin, and they projected slightly into the vena cava. The aneurysmal sac

contained a small clot. It was not adherent to the walls of the sac, nor was it laminated. (See engravings.)

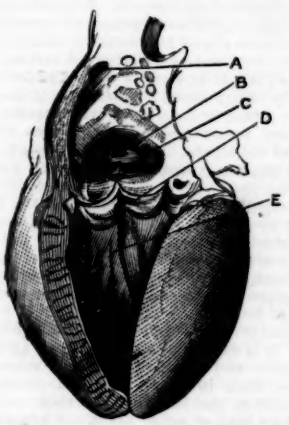
The explanation of the symptoms, as viewed by the light of the necropsy, is sufficiently obvious. The œdema of the face which followed a hard day's work was brought on by pressure of the aneurysm on the vena cava superior. The final catastrophe was caused by the rupture of the aneurysm into the vena cava. This produced pulsation in the veins of the head, neck, and arms, and the increasing congestion



From a drawing showing the rupture of the aneurysm into the superior vena cava. A, Superior vena cava. B, Rupture. C, Right auricle.

of the brain, which, in its turn, caused the coma from which the patient died.

Aortic aneurysms very rarely rupture into the vena cava superior. The reasons for this rarity are not far to seek, when the anatomical relations of those vessels are remembered. In order that this condition may obtain, two layers of pericardium have to be broken through, and it is also necessary that adhesions should have previously been



From a drawing of the aneurysm, showing the rupture from the aortic side. A, Innominate artery. B, Rupture. C, Aneurysm. D, Posterior aortic valve. E, Left ventricle.

established between the layer of pericardium covering the aorta and that covering the vena cava superior. Should the aneurysm burst before such adhesions are formed, the rupture is necessarily intra-pericardial.

The late Dr. Sibson made a careful analysis of nearly 900 cases of aortic aneurysm.[1] Of these cases, there were twenty-eight of rupture into the pericardium, and only seven of rupture into the vena cava superior. Dr. Sibson gives only a brief analysis of the cases, and it is a matter for regret that his contemplated work on aneurysms of the aorta was never published. Of the seven cases quoted by Dr. Sibson, two are museum specimens, of which the account is very meagre. Of the first, he says there was pressure on the vena cava descendens, the heart was large, and the right ventricle was hypertrophied and dilated.[2] Of the second cases,[3] the only information given is that there was pressure on the vena cava descendens. Concerning the cases, as distinguished from the museum specimens, rather more information is given. In Case 1, it is said there was pressure on the vena cava descendens, the heart was enlarged, the pericardium was adherent, cardiac murmur was said to be absent, and the patient had cough and dyspnœa. In Case 2, there was pressure on the vena cava descendens, a cardiac murmur was noticed, and the patient suffered from cough, dyspnœa, and pain in his neck and shoulders. In Case 57, Dr. Gibson merely mentions that there was a cardiac murmur and pressure on the trachea. In Case 63, the heart was large, a cardiac murmur was noticed, and the patient had cough, dyspnœa, and pain in his neck and shoulders. In Case 70, there was pressure on the vena cava descendens and on both lungs, there was erosion of the sternum, and the heart was stated to be healthy.

Among the Transactions of the Pathological Society of London I have found only one recorded case of an aneurysm of the aorta communicating with the superior vena cava, and this was a very interesting "card specimen" exhibited by Dr. Charlewood Turner,[4] and of which he gave full notes. Some of the symptoms mentioned in this case are identical with those observed in the case I have recorded. The patient had evidence of obstruction to the venous circulation in the upper part of his body. There was much duskiness of the face, and a loud "to-and-fro" bruit was heard over his heart. There is no note in Dr. Turner's case of the venous pulsation which formed so striking a symptom in Dr. Ewart's case. The morbid anatomy of the two cases differs considerably; Dr. Turner's appears to have been one of dissecting aneurysm. I have to thank Dr. Ewart for his kindness in allowing me to publish the case, and my friend Mr. John Richmond for making the drawings from which the engravings are taken.

Park-row, Albert-gate.

[1] The Aorta and the Aneurysms of the Aorta, by Francis Sibson, M.D., F.R.S. 1858.

[2] Museum specimen 13. [3] Museum specimen 31. [4] Vol. xxxvi., p. 148.

THE AFTER-TREATMENT OF TRACHEOTOMY IN DIPHTHERIA.

BY G. L. CHEATLE, M.R.C.S., L.S.A.,
LATE HOUSE SURGEON AND HOUSE PHYSICIAN OF KING'S COLLEGE HOSPITAL.

BY the kind permission of Dr. Beale, not only am I allowed to publish these cases, but by his sanction was allowed during my appointment as house physician to adopt a treatment of them which has resulted in two cases recovering out of five operated on. Unfortunately, lately the mortality in these cases at King's College Hospital has been rather severe. The chief principle of this method of treatment is rest and the strict attention to its details. It will be convenient to describe it under the headings of (1) General and (2) Local.

General.—Under this heading I would include every detail in the prevention of exposure at the time of operation, warm blankets, hot-water bottles, warmed sponges, warmed tube, and immediate transference to a tented bed warmed (up to about 70°) and moistened by steam. Chloroform was administered in every case during the operation, and the tracheotomy done was the low one.

Local.—This is the part of the treatment I particularly wish to call attention to. It consists of the choice of tube, and the clearance of the tube and the trachea. The tube found most convenient was the ordinary lobster-tailed low tracheotomy tube, the inner or lobster-tailed portion of which slips in and out with the greatest ease and least disturbance to the patient. In keeping the tube and trachea clear, the insertion of feathers, as was generally the custom here, was totally abolished; primarily for this

reason, that the irritation they caused of so delicately constituted a tissue as the lining membrane of the trachea must have tended to increase or produce inflammation, and, considering the temporary constitutional tendency, the induced inflammation would probably be of a diphtheritic nature. The air warmed and moistened by kettles, and the damp gauze covering the tube, not being found sufficient to keep the tube and trachea clear, two drops of a warmed solution of bicarbonate of soda (twenty grains to an ounce of water) were dropped down the tube every half-hour. This, together with occasional washing of the inner tube, and the catching of expectorated matter by the nurse to prevent inspiratory effort sucking it back again, were found to be all that was necessary. If the progress of the case is satisfactory, it is an obvious advantage to know when the tube may be with safety permanently removed. I was helped in the second case by my experience in the first. I placed a piece of cotton fibre in front of the nostrils two or three times a day, and when the expired air moved it I ascertained how the patient bore occlusion of the tube aperture. If satisfactorily, the tube was permanently removed. In the second case it was on the fourth day after the operation, and in the first case on the fourteenth. It probably would have been removed earlier in the first case had it been watched in the same manner. As constitutional treatment, these cases were all given, in doses varying with their age, sulphate of quinine, bromide of potassium, and sal volatile. The objection raised to this prescription was that bromide of potassium is a depressant, and therefore injurious in a depressing disease. I have given it to adults as well as to children, and they were all more composed under its exhibition than without it.

In one case, C. C——, a perfect cast of diphtheritic membrane of the trachea, its bifurcation, and smaller bronchi, was coughed up through the tube. So perfect a cast is it that one may suppose that the soda solution may have loosened the membrane, or that the bromide of potassium may have some action resembling its allied salt, iodide of potassium, in the action the latter has in bronchitis in the liquefaction of the sibilant rhonchi, and if so, the bromide of potassium and allied drugs may be granted some day an exfoliatory effect on diphtheritic membrane. The only remark on the cases necessary is to point out the fatal case of C. H——, aged one year and eight months, whose case was so hopeless from the first that the operation being performed at all was a questionable advantage. Besides being a badly nourished and emaciated infant, there were before operation dulness and tubular breathing at the base of the right lung, so that this can hardly be regarded as a fair trial case. The other two fatal cases were decidedly promising ones compared with the two cases of recovery.

G. M——, aged two years and three months. Family and previous history very good. Had been ill two days before admission. On admission the child was otherwise well nourished and healthy-looking. Lips cyanosed. Eyelids puffy. Marked inspiratory stridor and general signs of dyspnœa. Sinking in of ribs. Instinctively trying to produce vomiting by inserting the fingers into the back of the throat. Temperature 99·4°. A trace of albumen was found in the urine with the nitric acid and picric acid tests. Membrane on both tonsils; no limit to be seen below, and apparently spreading behind uvula. Also a profuse discharge from the nose. No hæmorrhage. Glands enlarged. Operation performed. Tube removed on the fourteenth day after it. The albumen eventually increased to one-third, and disappeared gradually; no casts; few red blood-corpuscles. Left hospital twenty-six days after admission. No paralysis. Complication: bronchitis.

M. M. S——, aged three years and ten months. Family and previous history good. Had been ill three days before admission. On admission, the child was otherwise healthy-looking and well nourished. Membrane on both tonsils, more on right than left. Glands of neck enlarged. Inspiratory stridor and marked dyspnœa, not so marked as in the above case. Temperature 98·6°. Trace of albumen in urine. After operation the temperature rose to 105°; it gradually came down next day and remained down. The albumen eventually increased to one-fifth, and disappeared gradually. Tube left out on fourth day after operation.

A. M. S——, aged one year and six months (sister to the above patient). Had been ill for three days after her sister had been admitted. On admission, the right tonsil was covered with membrane. Glands of neck enlarged. Trace of albumen in urine. Inspiratory stridor and cyanosis, and general sign of dyspnœa. Death occurred about sixteen hours after operation. No necropsy was allowed.

C. C——, aged four years and ten months. Family and previous history good. Had been ill for two days before admission. Both tonsils covered with membrane. Glands enlarged. Inspiratory stridor and general signs of dyspnœa. Temperature 101·8°. Ceased breathing during operation, but revived on insertion of tube. Died nineteen hours after operation. This is the case in which the cast spoken of above was expectorated. No necropsy was allowed.

C. H——, aged one year and eight months. Family history good. Had always been delicate; no actual disease. Had been ill some days before admission. No accurate history. Weakly, delicate, and badly nourished child. Membrane on both tonsils. Glands enlarged. Inspiratory stridor and laryngeal obstructive signs. Dulness at base of right lung and tubular breathing. No urine could be obtained for examination. Temperature 101°. Death occurred thirteen hours after operation.

Victoria-street, S.W.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

THE OPERATION OF PERITOMY, WITH NOTES OF TWO HUNDRED AND FIFTY CASES.

BY A. VERNON FORD, M.R.C.S.,

SURGEON TO THE PORTSMOUTH AND SOUTH HANTS EYE AND EAR INFIRMARY, AND OPHTHALMIC SURGEON TO THE GORDON BOYS' HOME.

THE operation of peritomy was first practised in 1862 by Dr. Furnari of Paris, and was afterwards largely used in cases of pannus by Mr. Critchett. Some statistics upon the subject are to be found in the London Ophthalmic Hospital Reports (vol. iv., p. 182). Of late years it has fallen to some extent into disuse, and this is, in my opinion, largely due to its having been applied to lesions for which it was not properly adapted. In suitable cases it is still of the utmost value to the ophthalmic surgeon. I would especially recommend it in those troublesome cases of keratitis, ulcerative, vascular, strumous, and suppurative, which are the opprobrium of our eye wards. Prolonged courses of drops and lotions have little if any effect upon such cases, while peritomy rapidly brings about a subsidence of the inflammation and a quick return to the normal transparency of the cornea. The increased pressure within the cornea arising from the separation of the strata, or by a blockage of the intercellular spaces and canals, is directly dependent upon the blood-supply of the part. Now, as the cornea derives its blood-supply principally from the conjunctiva, the local depletion consequent upon a division of its vessels, and of the loops which surround its circumference, would naturally tend to promote a healthy reaction, and facilitate the absorption of those stagnant cellular elements which separate the strata, and so interfere with the refraction of the cornea. After an experience of 250 cases, I am confident that peritomy yields unexceptionable results in the class of affections which I have indicated. It is useless to continue week after week to prescribe sedative and astringent lotions, when the case terminates too often in dense opacities which permanently impair the vision, and leave behind them amblyopia, astigmatism, and a host of evils. Without pressing my opinion unduly, I would submit that the operation is worthy of a trial, and that it is to be regretted that some of our best known text-books contain hardly any reference to so simple and effective a mode of treatment. Peritomy practised in a large out-patient department, involving as it does the use of anæsthetics, entails considerable labour upon the surgeon and his assistants. This is more than compensated for, however, when we find young patients who have suffered from all the distressing symptoms of photophobia, lacrymation, and blepharospasm coming back a few days after a thoroughly performed peritomy, and interviewing their doctor with an erect carriage and with a clearing cornea, through which day by day the light is more equally refracted.

As regards the operation itself, I do not believe in partial peritomies, and I take great care to thoroughly dissect the subconjunctival tissue right up to the margin of the cornea. The after-treatment consists in the use of mild astringents and antiseptics, boracic acid (ten grains to one ounce), or yellow oxide of mercury ointment (from four to eight grains to one ounce), to encourage the absorption of opaque elements. The general constitutional condition is, of course, a separate factor, which must be treated in each case upon its own merits. I make it a rule never to have recourse to peritomy until I find that milder measures are useless. If after a week's ordinary treatment the local condition is not improved, I have then no hesitation in operating. In all cases after operation I employ a compress of cotton-wool held in place by a bandage, shades being in my experience as often injurious as beneficial. I may say, in conclusion, that I have found peritomy useful in the chronic forms of keratitis, threatening staphyloma and degeneration of the corneal structure, but not so much so as in those acute and subacute affections for which it is, in my opinion, specific.

Southsea.

"BILIOUS ATTACKS."

By ANGEL MONEY, M.D., F.R.C.P.

THE bilious attacks occurring in neurotic individuals are very different paroxysms from those seen in habitual or occasional over-feeders. A clean tongue—often "geographical" or desquamating too freely in patches,—a scanty high-coloured lithatic urine, a sallow face, white motions, dilated pupils, low spirits, and absence of energy, constitute the clinical entity in many cases of "bilious attacks." These are very common in neurotic children with dainty appetites, in whom to suppose that irritation and vascular engorgement of the viscera, from over-feeding, exist, would be ridiculous. A sharp purge to these patients may do more harm than good, though it is possible to set the viscera working again by such sudden means. An inadequate liver may be the cause of a toxæmia, and the poison in the blood may have a selective action on the mental centres, originating lowness of spirits—melancholia; this is the view most favoured by the laity, but it is often incorrect. In truth, a mutual tension between the viscera and the brain exists—reciprocity rules the realms of the human body as it does the social organism. The truth appears to be that the viscera may go wrong as the result of being under-charged with nervous energy, and they simply cease to work effectively because of defective nervous energisation. The correct treatment is not a dose of castor-oil, but a tablespoonful of wine at once and a teaspoonful of syrup of the hypophosphites thrice a day for one week.

Harley-street, W.

PLEURITIC EFFUSION OF NINE YEARS' DURATION, TREATED BY THORACENTESIS.

By T. F. RAVEN, L.R.C.P.

J. D——, aged thirty-six, was seen by me early in March. He complained of dyspnœa, irritative cough with puriform sputa, and debility. He was somewhat cyanotic. The right chest was evidently "waterlogged." He gave the following account of himself. Nine years ago he was suffering from difficulty of breathing and pain in the side. He was admitted into Charing-cross Hospital, and, finding that the physician was determined upon thoracentesis, he took fright and left. Ever since then he had been subject to dyspnœa, which had gradually but surely increased upon him. On March 5th I drew off with the aspirator four pints and a half of blood-stained and rather thick serum. It resembled, in the patient's words, "beef-tea." Great pain, resulting probably from the stretching of old adhesions, followed the operation, and lasted for thirty hours; but the relief was great. A fortnight later nearly three pints of similar fluid were withdrawn. He seemed to feel the shock of the operation severely, and the pain which followed was both more acute and more protracted than on the first occasion; still the result was good, and the physical signs began to abate. Five weeks afterwards, about eight ounces of turbid yellow fluid were extracted by means of a cannula and indiarubber tube. This operation occasioned but little shock, and scarcely any pain resulted. Since then he has steadily improved, and although there is still some dull percussion and deficient respiratory murmur over the affected side, owing doubtless to thick adhesions, and perhaps some residual fluid, yet he is free from pain and capable of following his occupation.

I record this case on account of the exceedingly chronic character of the effusion, which during nine years had not been converted into pus; and also to indicate the results which may be obtained by thoracentesis in very long-standing pleuritic effusion.

Broadstairs.

CASE OF SPONTANEOUS EXPULSION.

By WM. LANGRAN, L.R.C.P. EDIN., &c.,
MEDICAL OFFICER, AXMINSTER WORKHOUSE.

ON the morning of April 16th I was hurriedly sent for by my friend Dr. W—— to assist him at a difficult midwifery case. On arriving, I was informed that the woman had been in labour two days with her second child, when the midwife, discovering an arm presenting, sent for Dr. W——, who endeavoured to turn, and succeeded in bringing down a foot, but could not turn the child. I found the right hand and left foot presenting, and also failed to turn. The pelvis was very roomy, and I had no difficulty in feeling the face in the hollow of the sacrum. We were considering the necessity of performing embryulcia, when the woman had a very severe pain, and I distinctly felt the head move further down, and at the same time the foot receded. By making some traction on the protruded arm, which was advancing further out, the patient was delivered of a large-sized dead child. I have no doubt that delivery would have been accomplished without any assistance with another pain. The mother has made an uninterrupted recovery.

Axminster.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

CHARING-CROSS HOSPITAL.

SUBCRANIAL AND SUBDURAL HÆMORRHAGE AFTER INJURY; LOCALISATION OF EFFUSION; TREPHINING; DEATH; NECROPSY.

(Under the care of Mr. BELLAMY.)

ANY contributions to brain surgery are of importance and value, and, when from the symptoms the lesion has been localised, of peculiar interest, and pregnant with suggestion for future operative undertaking. In the case of a primary lesion of the brain, the condition of the scalp or of the bone will often assist materially in the localisation of the lesion, but in this instance the diagnosis had to be made from the symptoms which developed on recovery from the concussion. These symptoms were those met with in cases of hæmorrhage following laceration of the brain, and, as usual in such injuries, there was marked rise of temperature. From their increasing severity it was evident that unless the man could be relieved by operation death would soon ensue. Mr. Bellamy therefore trephined, and that the operative treatment employed was that best calculated to relieve the patient's symptoms was proved by the condition of parts found at the time of operation, and later at the necropsy.

George B——, a man aged fifty, was admitted on Thursday, April 25th, apparently suffering from symptoms of severe concussion, the result of a fall from a scaffold. He was collapsed, with a temperature of 95·5°. He vomited soon after admission, and continued doing so till the evening.

He was drowsy, but not comatose, irritable at times, and complained of headache. Later on, the left lower part of the face was markedly paralysed, also the left side of the tongue, and there was some weakness in the left arm. The irritability increased the next day, and the patient actually left his bed twice during the night. The drowsiness also increased, and the patient showed signs of irritation when disturbed. In the afternoon he had a fit, and he had two similar fits in the night. On the morning of the 28th, the fits were very frequent (about six in half an hour). All of them began in the left lower angle of the mouth; next, in the left side of the face; then twitchings of the left hand and right side of the face at the same time. The eyeballs were directed to the left; soon afterwards the head too. The left leg was next convulsed, then the right, and lastly the right arm. The patient was now violently convulsed, bit his tongue, and gradually turned the eyeballs and face to the right side. Since admission he had been lying on either side, but never on the back. The temperature since the reaction had been about 102°. There was slight puffiness to be felt on the right side of the head.

On Sunday, April 28th, at 11 A.M., Mr. Bellamy proceeded to operate. The strictest antiseptic precautions having been taken and ether administered, the position of the facial centre on the right side was determined by the lines proposed by Godlee; a semilunar flap of skin was turned down, the vessels clamped, and the periosteum raised. A fracture was discovered running obliquely from before backwards; a large trephine was applied over the spot indicated. The skull was very thin. There not being sufficient area, the aperture in the cranium was much enlarged with strong forceps, when a large amount of subcranial clot was found; this was easily removed by the finger, and the clot cavity washed out. Mr. Bellamy, thinking that there must still be subdural hæmorrhage, incised the dura by a T incision, coming at once upon clot and florid blood. After still further enlarging the dural wound and prolonged search, a posterior branch of the middle meningeal artery was found and ligatured, when all hæmorrhage appeared to cease. The fits became fewer for some little while, but he died on the following morning.

At the post-mortem examination held fifty-six hours after death, the body was that of a well-nourished man. Rigor mortis was present in the lower, but was passing off in the upper, extremities. On opening the wound over the right parietal region, a feeble union had taken place along its whole length; the edges were readily separated. On lifting up the flap of operation, the brain was observed lacerated, and there was a considerable quantity of blood. Beneath the scalp, especially over the occipital region, there was extravasated blood. On the removal of the skull-cap, there was a hole corresponding to the part trephined, an inch and a half long by three-quarters of an inch broad, the long diameter extending antero-posteriorly. This was prolonged over the posterior inferior part of the parietal bone, and was the seat of the fracture. A fracture extended from the hole backwards to the parieto-occipital suture, and forwards to the temporo-sphenoidal suture, and there was a small fracture half an inch long, reaching upwards into the parietal bone. Over the occipital region of the dura mater a thin layer of coagulated blood was found between it and the bone. On opening the dura mater, a large amount of extravasated coagulated blood was seen covering the whole of the posterior half of the brain—subarachnoid. The convolutions were flattened, and the portion of lacerated brain which corresponded to the trephined hole of the skull, was the upper part of the temporal lobe, comprising mostly the superior temporo-sphenoidal convolution. This lacerated brain had a different appearance from the lacerated and contused portion of the brain corresponding to the inferior frontal convolution at its junction with the ascending parietal, which was undoubtedly the original seat of injury and the cause of many of the symptoms observed during life. On removing the brain, no fracture of the base was discovered, and there was little hæmorrhage about the base of the brain. Sections were made through the brain, when the previously described area of the frontal lobe was found to show almost complete destruction of grey matter of the cortex of Broca's convolution. There was a separation between the manubrium and gladiolus of the sternum, and on opening the thorax the lungs were observed to fill the thoracic cavity, œdematous and congested throughout. All parts of the lungs crepitated; the lower lobe of the right lung did not crepitate to the same extent as the other parts, and appeared to be in the first stage of pneumonia; portions floated in water. Kidneys fairly healthy. Heart normal.

SOUTH DEVON AND EAST CORNWALL HOSPITAL, PLYMOUTH.

THREE CASES OF DIABETES INSIPIDUS IN ONE FAMILY; REMARKS.

(Under the care of Dr. R. H. CLAY.)

THESE cases are interesting examples of pseudo-diabetes, polyuria, or diabetes insipidus occurring in three members of one family. In some instances related by Dr. Roberts there was a well-marked history of the occurrence of the disease in several members of the same family. Many of our readers are acquainted with the family history of a case given by Lacombe, in which the mother, three sons, and a daughter, her brother and three children, all suffered from diabetes insipidus. It is a curious fact in the history of the family to which these patients belonged that a third of the children had died from tubercle, tuberculosis being regarded by some as a cause of the disease. Inosite, or muscle sugar, has been sometimes found in the urine of patients suffering from diabetes insipidus, but is often absent; it has been found in several other diseases, and cannot therefore be looked upon as possessing any clinical importance. Although treatment has proved so unsatisfactory, and most of the sufferers from this disease die from lung complications, there are recorded cases in which the disease ran its course over a period of more than fifty years. For the following notes we are indebted to Mr. W. L. Woollcombe, house surgeon.

These three patients (two boys and a girl), all members of one family, were admitted on Feb. 8th, 1889, complaining of great thirst, and the excretion of a quantity of pale, watery urine, accompanied by loss of appetite and wasting. The family originally consisted of fifteen; but, from various causes had been reduced to five. The first child died at the age of thirteen, of phthisis with hæmoptysis; the second (Emma) is the eldest of the three patients; the third is in good health and is now nineteen years old; the fourth died at the age of three weeks (cause doubtful); the fifth died of phthisis, aged fifteen months; the sixth was stillborn; the seventh is in good health, and now aged fourteen; the eighth (John) is the second patient; the ninth was stillborn; the tenth is in good health, and is ten years of age; the eleventh (Samuel James) is the third patient; of the twelfth, thirteenth, and fourteenth (triplets), one was stillborn, and the other two died at the age of fourteen weeks of consumption; the fifteenth died of consumption at the age of nine months. The father and mother are both living at the present time. The mother is quite healthy. The father also was so until twenty-five years ago, two years after his marriage, and two years before the birth of the second child (the first affected). At this time he was hauling up the sheet of a vessel, when a yard fell and struck him on the back; he immediately lost power in his lower extremities, and had some difficulty in micturition and defecation. These latter symptoms soon disappeared, and after twelve months he was able to get about with crutches. There was no loss of sexual power, and two years from the time of the accident a second child was born (the eldest patient). At the present time the father walks with two crutches, is well nourished, and healthy-looking. The patellar reflexes are quite absent, and there are no signs or symptoms of an ascending lesion in the cord. The paternal and maternal grandparents remained healthy to old age. No uncles or aunts affected.

CASE 1.—Emma, aged twenty-three, a pale, emaciated girl, with pinched features and a careworn expression, very ill-developed and small, began to experience increased thirst about fourteen years ago—i.e., at the age of nine. This symptom rapidly increased, so that she was compelled to rise continually in the night to drink and void urine; and soon she began to lose flesh and appetite, and to experience itching of skin.

The following was the condition on admission:—Lungs normal, with the exception of somewhat coarse and exaggerated breath sounds over the left middle lobe. Heart

normal. Skin rather dry, having a few eczematous patches on the arms. Urine perfectly colourless; sp. gr. 1001; slightly acid; no albumen or sugar; passed in immense quantities—twenty pints in twenty-four hours. Other organs healthy. Weight on admission, 5 st. 7½ lb.; second week, 5 st. 6¾ lb.; third week, 5 st. 3¾ lb.; fourth week, 5 st. 10 lb.; fifth week, 5 st. 10½ lb.; sixth week, 5 st. 13 lb.

Average daily amount of fluid taken in the first week, 18 pts. 6 oz.; second week, 13 pts. 5 oz.; third week, 14 pts. 2 oz.; fourth week, 15 pts. 5 oz.; fifth week, 18 pts. 6 oz.; sixth week, 17 pts. 6 oz. Average daily amount of urine passed in the first week, 16 pts. 5 oz.; second week, 13 pts. 2 oz.; third week, 14 pts. 2 oz.; fourth week, 16 pts. 3 oz.; fifth week, 21 pts. 4 oz.; sixth week, 21 pts. 15 oz.

During the first week no drugs were given, and an unlimited quantity of fluid was allowed; after this the amount of fluid taken in any given twenty-four hours was limited to the amount of urine passed in the previous twenty-four hours. Large doses of valerian, and subsequently ergot, and then codeia, were given and pushed till physiological action was produced.

CASE 2.—John, aged thirteen. Similar symptoms to those in Case 1 commenced four years ago—i.e., at the age of nine.

On admission the condition was as follows:—Tongue red, but moist. Skin dry and slightly scaly. Lungs: expansion and percussion note good and equal; increase of vocal vibrations and vocal resonance over upper half of right chest. Urine alkaline; very pale, with slight deposit of phosphates; sp. gr. 1009; no albumen or sugar; 110 ounces passed in twenty-four hours. Weight on admission, 3 st. 12 lb.; second week, 3 st. 11¼ lb.; third week, 3 st. 11½ lb.; fourth week, 3 st. 13½ lb.; fifth week, 4 st. 1 lb.

Average amount of fluid taken in twenty-four hours in the first week, 5 pts. 11 oz.; second week, 5 pts. 12 oz.; third week, 4 pts. 4 oz.; fourth week, 4 pts. 14 oz.; fifth week, 5 pts. 5 oz. Average amount of urine passed in twenty-four hours in the first week, 5 pts. 7 oz.; second week, 5 pts. 5 oz.; third week, 4 pts. 4 oz.; fourth week, 4 pts. 2 oz.; fifth week, 6 pts. 7 oz.

CASE 3.—Samuel, aged nine. More healthy in appearance than the previous two patients, though rather pinched and shrivelled. The symptoms had only just commenced, but were similar to those of the others.

When seen, the following was the condition:—Tongue moist and clean. Skin rather, but not markedly, dry. Thoracic organs healthy. Urine: sp. gr. 1008; no albumen, sugar, or inosite. Weight on admission, 2 st. 11½ lb.; second week, 2 st. 10 lb.; third week, 2 st. 9½ lb.; fourth week, 2 st. 11 lb.; fifth week, 3 st.; sixth week, 3 st. 13 lb.

Average amount of fluid taken in twenty-four hours in the first week, 5 pts. 5 oz.; second week, 5 pts.; third week, 4 pts. 8 oz.; fourth week, 1 pt. 4 oz.; fifth week, 1 pt. 16 oz.; sixth week, 2 pts. Average amount of urine passed in twenty-four hours in the first week, 4 pts. 4 oz.; second week, 4 pts. 10 oz.; third week, 1 pt. 15 oz.; fourth week, 1 pt. 6 oz.; fifth week, 2 pts.; sixth week, 3 pts. 2 oz.

The same treatment was adopted in the last two cases as in Case 1, besides a course of arsenic and also bromide of potassium. There is reason to believe, however, that in Case 3 the patient managed to deceive the nurse as to the amount of fluid taken and passed.

Remarks.—These seem to be three undoubted cases of so-called diabetes insipidus. It is remarkable that in all three cases the symptoms commenced at the age of nine; that none were markedly affected by treatment, except Case 3, and he soon relapsed; and in all three increased weight was coincident with the excretion of a greater quantity of fluid than was imbibed. They also illustrate facts noted by other authorities: e.g., that males are more affected than females—in the proportion of two to one; and that the commonest age for development of symptoms is from five to ten years. It would be interesting to know whether the father's accident had any effect on the health of his offspring. The tendency to tubercular affections was most strongly marked in all the family, although this was not so in either the father's or mother's family.

CIVIL LIST PENSION.—Mr. James Hutchison Stirling, of Laverock-bank-road, Edinburgh, LL.D. Edin., L.R.C.S. Edin., has been granted a Civil List pension of £50 per annum.

Medical Societies.

OBSTETRICAL SOCIETY OF LONDON.

A MEETING of this Society was held on June 5th, Dr. A. L. Galabin, President, in the chair.

The Diagnosis of Placenta Prævia by Palpation of the Abdomen.—This paper was read by Dr. HERBERT SPENCER, assistant obstetric physician to University College Hospital. Having described shortly two cases in illustration of the possibility of determing the site of the placenta by abdominal palpation when it is situated in the upper segment of the uterus, the author gave in detail seven cases of placenta prævia (all the cases he had investigated from this point of view) in which he had been able by palpation of the abdomen to diagnose the presence of the placenta in, or its absence from, the front wall of the lower segment before a vaginal examination was undertaken, the diagnosis being subsequently verified by vaginal and intra-uterine examination. The seven observations were all made in multiparæ with head presentations, before the membranes were ruptured, without the employment of an anæsthetic, and in the absence of pains. In three of the seven cases the exact site of the placenta on the front wall of the lower segment was determined by abdominal palpation, and in two of these the placenta was felt at a time when it was impossible to feel it by the vagina. In the remaining four cases the placenta was diagnosed by abdominal palpation to be absent from the front wall. In making the examination, it was recommended that the patient lie on her back, the bladder having previously been emptied; the examination should be gentle, made in the absence of pains, and prolonged over several minutes, or repeated if necessary. The following rules for making the diagnosis were formulated: In an ordinary vertex presentation (placenta in the upper segment), the occiput, forehead (at a higher level), and side of the head can, under favourable circumstances, be distinctly felt in the lower segment of the uterus by means of abdominal palpation. In a case of placenta prævia in which the head presents, the head is not felt where the placenta is situated, it is distinctly felt where the placenta is absent. In cases where the placenta is in front, the organ is felt as an elastic mass of the consistence of a wetted bath sponge, which keeps the examining fingers off the head. Its edge may be felt, and has the shape of the segment of a circle; within the circle all is obscure to the touch; outside the circle the head or other part of the child is plainly felt. Impulses to the head are not clearly felt through the placenta; impulses to the head through the placenta are distinctly felt at the spot from which the placenta is absent. The same applies to combined vaginal and abdominal examination. The author believed the method of diagnosis he had described to be of some practical importance, and solicited a more extended trial of its value.—Dr. BRAXTON HICKS considered that the author had done something to remove the slur, cast by the French and others, that abdominal palpation is not taught in England. Incidentally, in writing, Dr. Hicks had stated that in many cases the seat of the placenta could be identified by the hand, the placenta being on one side and the fœtus on the other side of the relaxed uterus. In one case of placenta prævia he had diagnosed the position some weeks before it was confirmed during delivery.—Dr. BARNES thought that the paper was a valuable contribution to the art of scientific diagnosis. It was observed by others, and he had himself confirmed the observation, that when the placenta was seated in the upper zones and in front of the uterus, the uterine wall was thickened and raised at the area of placental attachment, forming a hillock, which rose above the level of the smooth surface of the uterus. This was also confirmed by auscultation.—Dr. MATTHEWS DUNCAN had long and often sought to diagnose the portion of the healthy placenta during pregnancy by palpation, and had always failed. Meantime, he did not believe that it could be done; but what he had heard to-night would make him return to the subject, and he was ready to learn. In order to know what was to be expected and felt, it was necessary to divest the mind of the perception of the feeling of a born placenta, and to learn the feeling of an attached, living, healthy placenta in the uterus. The born placenta was a thrombosed cake. Tracing the cord into the uterus, as in a version, the obstetrician came to the placenta, and

felt it ill-defined, soft, with a fretted, vesicular surface—not easy, in fact, to recognise at first touch. Placenta prævia was not the best condition for the study of this supposed palpation. Far more favourable for the purpose were the conditions of advanced healthy pregnancy in a multipara with a relaxed uterus and a thin abdominal wall. If placental palpation were ever made out, it would be there. Dr. Duncan had never made it out.—Dr. CHAMPNEYS asked Dr. Hicks and Dr. Barnes whether, in the cases in which they had stated that they had felt the placenta from without, they had verified their diagnosis by internal palpation, or whether they felt something which they believed to be placenta. The value of Dr. Spencer's paper lay in this verification, though the cases were few. Dr. Champneys was surprised to hear Dr. Barnes speak of diagnosis of the placental site by auscultation. In two or three cases of advanced extra-uterine pregnancy in which the placenta could be plainly felt, and in which the diagnosis was established by subsequent abdominal section, no sound was ever heard over it, though repeatedly sought for. For these and all other reasons he believed that auscultation was no guide whatever to the situation of the placenta.—Dr. JOHN PHILLIPS stated that in a case of Cæsarean section which had occurred in his practice, every attempt was made, on exposure of the uterus, to discover the situation of the placenta by auscultation and palpation. The evidence being negative, it was concluded that the placenta was situated at some distance from the line of incision. Yet on making the incision the placenta was found immediately beneath. This experience militated against the possibility of diagnosing the position of the placenta through the abdominal walls.—After some observations by Dr. HAYES, it was noted by Dr. HERMAN that in all the reported cases the fœtal head occupied the lower uterine segment. Thickening of the lower part of the uterus was easier to appreciate when the head filled that part than when it was occupied by softer and more movable parts of the fœtus. In the reported cases the placenta was described as "an elastic mass," the edge of which could be felt. Such placentæ were the exception, and, as Müller had demonstrated, were generally thinner than usual and expanded. Thus Dr. Barnes had described a placenta that enveloped the fœtus like a sac; and Dr. Hicks had noted a case where that structure occupied almost the whole inner surface of the uterus. Dr. Herman was surprised to hear Dr. Barnes speak of ascertaining the position of the placenta by auscultation. He thought that it was now conclusively proved that the uterine souffle had nothing whatever to do with the placenta. In extra-uterine pregnancy it was so rarely heard that its absence had been considered as an indication that pregnancy was extra-uterine.—Dr. WILLIAM DUNCAN dwelt on the difficulty of diagnosing the position of the placenta by external palpation. A few months ago he performed Porro's operation. When the anterior surface of the uterus was exposed, it was not found to bulge forward, nor was it deepened in colour, as should be the case, according to Dr. Spencer, when the placenta was in front; yet, on plunging the knife into the uterus the placenta was cut through.—Dr. BOXALL had made it an invariable rule to examine the abdomen with all the precautions advocated by Dr. Spencer. Yet he had rarely found palpation of any avail in determining the placental site. He had, however, investigated the position of the placental implantation by other methods, commenced five years ago. They led him to the conclusion that, while the sides, front, and back were about equally favoured, the placenta tended very distinctly to avoid the two poles of the uterus. At the same time, considering that, generally speaking, a point somewhat nearer the upper than the lower pole was the selected site, and that the placenta was very rarely attached quite low down in the uterus, Dr. Boxall was not a little surprised to find the relative frequency with which the lower or dangerous zone was encroached upon, without of necessity entailing hæmorrhage. He could, however, call to mind no case in which, when proved by other means to be implanted low down on the anterior wall, it had been possible to map out the position of the placenta by palpation of the abdomen.—After some remarks by the President, Dr. BRAXTON HICKS said, in answer to Dr. Champneys, that for many years he had seen from time to time such proofs as led him to feel certain that the position of the placenta could be made out not infrequently. In regard to Dr. Matthews Duncan's observations he would add that, though in many cases it might be difficult to recognise this, he thought that if this paper by Dr. Spencer led to more extended observations, the author's conclusions would be established. Dr. Hicks himself first pointed out, not so very long ago, that the uterus during the whole of pregnancy was intermittently contracting and relaxing, and now that fact was fully recognised.—Dr. BARNES was ready to accept Dr. Matthews Duncan's and Dr. Champneys' avowal that the placenta could not be made out by palpation as applied to themselves; but those obstetricians were not entitled to deny that others could do it.—After some remarks by Dr. W. S. A. GRIFFITH Dr. SPENCER replied. He had stated in his paper that the placenta was not firm to the feel, and had likened its consistence to that of a wetted bath sponge for want of a better simile; it was a soft, elastic swelling. He was rather surprised to hear that Dr. Braxton Hicks and Dr. Barnes had for long been able to feel the placenta by abdominal palpation, and had not recorded their cases. From observation of the placental souffle in normal cases and in placenta prævia he could not admit that information of diagnostic value could be obtained by auscultation. The living placenta did not differ from the dead in consistence only; it was also much larger. Dr. Spencer could confirm Dr. Champneys' statement as to the ease with which the placenta could be felt in some cases of extra-uterine gestation. The Cæsarean section and the Porro's operation cited by Dr. Phillips and Dr. William Duncan were not examined under the conditions laid down in Dr. Spencer's paper as essential; besides, they were not cases of placenta prævia. From actual measurement of specimens he did not think that the prævial placenta was unusually thin and spread out. The presenting part varied, chiefly as the result of examination or apoplexy. In one of his cases, at the eighth month the part felt by the abdomen was an inch and a half thick near the edge.

Anterior Serous Perimetritis simulating Ovarian Sarcoma when explored by Abdominal Section; Recovery, with disappearance of the Cyst.—Notes of a case illustrating this condition were read by Mr. ALBAN DORAN, surgeon to the Samaritan Free Hospital. A sickly girl, aged sixteen, was sent to the author by Dr. Herbert Ilott, of Bromley, on May 3rd, 1887. In the middle of the previous month her period did not appear. An abdominal swelling was discovered, and the patient confessed that pregnancy was possible. A soft fluctuating tumour, which reached as high as the umbilicus, filled the lower part of the abdomen. The vagina was capacious. The uterus lay high in the pelvis, and the cervix was small; the sound could be introduced nearly three inches. The uterus was quite movable, but every movement of the tumour was communicated to the sound. The patient's tongue was bright-red and glossy, her appetite bad, and she had lost a brother from tuberculosis. On June 18th Mr. Doran made an exploratory incision. The peritoneum was found to be very thick; it adhered intimately to a firm, spongy substance which lay beneath it, and oozed freely on section. Suspecting that the disease might be ovarian sarcoma (which is not rare in young girls, and is often accompanied by amenorrhœa), the operator closed the wound. The patient made a good recovery. Profuse vaginal discharge occurred soon after she left the nursing home where the operation was performed. The swelling slowly diminished, but the patient remained sickly. In September, 1888, Mr. Doran saw her again, and found that all trace of the tumour had disappeared. In April, 1889, she was in fair health. The catamenia, absent since April, 1887, had never reappeared. The nature of the disease was then discussed. The history contraindicated sarcoma of the ovary, or any other tumour, or ectopic gestation. The fact that the peritoneum, recognised by the urachus, lay in front of the morbid collection contraindicated anterior perimetritis. Had the disease been tubercular peritonitis the patient would hardly have recovered her health. Mr. Doran gave reasons for believing that the morbid appearances in this case indicated anterior serous perimetritis, possibly originating in early abortion or gonorrhœa. The solid substance under the peritoneum was probably omentum, thickened by old inflammation.—After some inquiries by Dr. BARNES concerning the state of the Fallopian tubes, Mr. KNOWSLEY THORNTON remarked that the case would probably turn out to be tubercular. He had met with several apparent cures from exploratory incisions in like cases. The amenorrhœa would strengthen this view; it was common in tubercle of the peritoneum in young girls.

The time which had passed since the operation without fresh outbreak did not, in Mr. Thornton's opinion, contra-indicate tubercle.—Mr. DORAN said that, at the operation, neither the tubes nor any other organs could be reached. He thought that salpingitis—gonorrhœal, tubercular, or from abortion—might well have been present, at least in the early stage of the patient's illness. He admitted that there was great force in Mr. Thornton's arguments respecting tubercle; according to that surgeon the disease might be termed "anterior serous tubercular peritonitis." Gonorrhœa might predispose a patient to tubercle of the genital tract.

Specimens.—Mr. J. K. THORNTON: (1) Ruptured Fallopian Tube; (2) Two Uterine Fibro-cysts.—Mr. ALBAN DORAN: Fibroma of the Ovarian Ligament, weighing sixteen pounds, successfully removed during life.—Dr. AMAND ROUTH: Pelvic Viscera from a Case of Primary Cancer of the Fallopian Tube and Recurrence after Operation.—Dr. CLAPHAM: Small Dead Fœtus born with a Seven Months' Living Twin.—Dr. WILLIAM DUNCAN: Heart and Brain from a Case of Puerperal Septicæmia, fatal on the thirteenth day.—Dr. GRAILY HEWITT: Instrument for Antiseptic Irrigation in Childbed.

ANATOMICAL SOCIETY OF GREAT BRITAIN AND IRELAND.

THIS Society held its May meeting on Thursday, May 30th, the President, G. M. Humphry, M.D., F.R.S., in the chair. A great many topics of interest were discussed, and amongst them the position of the human epiglottis was referred to by Dr. Symington, who brought specimens to show that its intra-narial position in some human fœtuses was due to the extreme flexion of the head. Professor Stewart made an addition to our knowledge of those cutaneous folds which are seen occasionally upon the necks of goats, and sometimes in the human subject, by demonstrating that they contained a rod of yellow fibro-cartilage. Mr. Shattock said he had seen the same structure in a fold removed from a child's neck. Opinions seemed unanimous that these folds were supernumerary auricles. Mr. Arthur Thomson next demonstrated a number of peculiarities in the tibia and astragalus, which consisted in facets caused by the squatting position assumed by certain races. Amongst the specimens shown were some fishes' skeletons by Professor D'Arcy Thomson; the spine of a young gorilla, to show the existence of the lumbar curve, by Dr. Symington; models of a flexed elbow and wrist joint, by Professor Cunningham; and a rare abnormality of the heart and another of the muscular system, by Messrs. De Renzi and J. J. Clarke respectively.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

Pernicious Anæmia.—Choroidal Sarcoma.—Tumour of Pons.—Gastric Ulcer.

AT a meeting of the Pathological Section held on March 22nd, Mr. J. B. Story (Secretary) read the report of Dr. Ninian Falkner upon the Rhinolith exhibited at a former meeting by Dr. M'Weeny. The analysis is nearly identical with one made by Romer of a similar calculus.

Dr. GRAVES showed microscopic sections from cases of Pernicious Anæmia which had been stained by a modification of Weigert's process. He argued that by this process the health and vitality of the red blood-cells could be ascertained, the healthy staining deeply and the worn-out ones not staining at all. He also showed portions of liver and kidney stained with hydrochloric acid and ferrocyanide of potassium, which gave a deep-blue colour from the deposit of iron in the tissues. In one specimen he found bacteria, which he believed had reached the tissues from the diseased intestinal tract.—Dr. BOYD said that though the disease might have a clinical it had not a pathological entity. The majority of pathologists had found in the gastro-intestinal tract sufficient evidence to class the disease, not as a disease of the blood, but as a disease of blood destruction produced by the absorption from the gastro-intestinal tract of some po son. With regard to the presence of bacteria in the liver n Dr. Graves' case, some years ago, during the formation of the Mont Cenis tunnel, workmen died of some form of pernicious anæmia, and it was afterwards found that their gastro-intestinal tracts were filled with a form of parasite which was believed to have led to the blood destruction.—Dr. EARL said his experience as to the staining of the blood-corpuscles by Weigert's method did not at all accord with that of Dr. Graves. In some of his own preparations he found the large bloodvessels filled with corpuscles that did not stain at all, and then he came on other blood-vessels containing corpuscles that were always staining.—Professor PURSER said he entirely concurred in what had fallen from Dr. Earl as to the staining. Anyone who had the slightest experience of the examination of blood by means of ordinary agents would see that the blood-corpuscles were not all of the same kind—that some would yield up their colouring matter, whilst others would not; and what this difference depended on they did not know, although he believed it depended on the age of the corpuscles. He did not think Dr. Graves had proved the points he sought to make.—The PRESIDENT (Dr. Gordon) said it was worth consideration whether the air in the blood was owing to the pernicious anæmia, or was not more directly connected with the fatty degeneration that seemed to have existed in the case. Dr. Graves had mentioned to him that the muscular structure of the heart was largely saturated, so to speak, with fatty development. They knew that fatty development was one of the symptoms of the disease in question.—Dr. GRAVES, in reply, said he had no doubt that different hardening agents might so alter the object that no good result would be attained; but he would remind Dr. Earl that he had suggested that fresh blood should be used in the slides without any hardening agent. As to the bacteria, he did not suppose that they had anything to do with the pernicious anæmia. He only mentioned them because he found them. He believed that they were the bacteria of putrefaction.

Mr. ARTHUR BENSON read the notes of two cases of Choroidal Sarcoma that had recently come under his care in St. Mark's Ophthalmic Hospital. Both were in women, aged respectively fifty and forty. The affected globes were in each case enucleated. In the first case the tumour was entirely intra-ocular, it had given rise to a condition of secondary glaucoma, and the retina was completely detached. Microscopically, the growth was a spindle-celled pigmented sarcoma. In the second case (sections of which were also exhibited) the growth had filled nearly the whole of the globe, and had also extended through the sclerotic, forming a large orbital tumour attached to the globe. The microscopic sections showed the tumour to be a round-celled and very deeply pigmented sarcoma, with so little binding tissue that it was difficult to get the section to hold together during the staining processes. It consisted almost wholly of deeply pigmented cells. The history showed that the rate of growth of the extra-ocular portion of the tumour was about twenty times as great as that of the intra-ocular portion. The tumour cells seemed to pass out along the perforating vessels and through the optic nerve. The sclerotic, though much thinned, could everywhere be seen separating the intra-ocular from the extra-ocular portions. The optic nerve was very much disorganised and pigmented.—Dr. GRAVES said the two tumours in this case were widely different. One was a spindle-celled sarcoma without pigment, while the other was round-celled and had a great deal of pigment. These tumours generally seem to pass out by the bloodvessels; but in the present case they passed along the optic nerve.

The PRESIDENT exhibited a Tumour the size of a large marble, of a fibro-gliomatous nature, which occupied a very considerable portion of the Pons, though principally situated in its left half and posterior part. It was removed from the body of a patient aged thirty-five, who was free from all syphilitic or tubercular taint and history, and who had been admitted in August, 1888, to Sir Patrick Dun's Hospital, after a fortnight's illness, and who died comatose six weeks subsequently, with most of the symptoms of bulbar paralysis. The case was one of much interest, as it exhibited in a typical manner the evidences of focal disease situated in the pons. On, or shortly after, admission the following were the marked symptoms: 1. Incomplete paralysis of motion, and sensation of the right arm and leg, with a loss of muscular sense. 2. Facial paralysis on the left side, involving the frontal and ocular branches. 3. Conjugated lateral deviation of the eyes to the right side. 4. Paralysis of the left sixth nerve, and associated paralysis of the right internal rectus. 5. Slight optic

neuritis of the left eye. 6. Paralysis of expulsive power of the bladder and rectum. Typical bulbar paralysis, involving the tongue, lips, and pharynx, was added, along with complete anæsthesia of the areæ of distribution of the fifth nerve to the right side of the face, lips, and tongue; increasing muscular weakness, inability to stand up or sit, without tottering or falling backwards; paralysis of respiration, and filling up of the bronchial tubes with mucus. Intense double optic neuritis, convulsions, and coma brought the case to a close the first week in October.

Dr. M. A. BOYD exhibited a Stomach showing Acute Perforation from Gastric Ulcer. The patient was admitted into the Mater Misericordiæ Hospital with symptoms of acute peritonitis, and died some hours after admission. On opening the abdominal cavity, a circular rent, about the size of a sixpence, was visible on the anterior surface of the stomach, a quarter of an inch above the attachment of the great omentum, and midway between the cardiæ and pylorus, and slightly overlapped by the left lobe of the liver, which did not quite prop it up. In the opening some half-digested fragments of egg were found, and other portions of the same material were scattered through the peritoneal cavity. The coils of intestine, adhering by soft, lymphy exudation, were of a bright-pink colour, and, when raised, showed here and there beneath them small purulent collections. The peritoneal cavity contained about a quart of flaky serum. The interior of the stomach showed a large ulcer, or rather excavation, about two inches and a half long by two inches broad, extending from its posterior surface across the greater curvature and up the anterior wall to the site of the rupture. The pancreas, which was adhering, formed its floor, and was deeply excavated, as if digested by the gastric juice. The stomach was hour-glass in shape, from the contracted margins of the ulcer, which showed intense venous enlargement. Dr. Boyd alluded to this venous thrombosis of some portion of the gastric mucosa as the starting point of the necrotic process.

MIDLAND MEDICAL SOCIETY.

A MEETING of this Society was held on April 17th, Hugh Ker, F.R.C.S. Ed., President, in the chair.

Cervical Caries treated by a Collar Splint.—Mr. A. F. MESSITER showed a boy, aged seven, who had suffered from cervical caries for four years. In June he became paraplegic, and soon lost control over his bladder and rectum. In the following October an abscess broke in the right side of the neck. In December he came under Mr. Messiter's care, at which time his spine was tender, rigid, and thickened, the head and neck flexed, the chin resting on the sternum. There was a freely discharging sinus on the right side of his neck, the lower extremities were paralysed, there was some impairment of sensation, and the urine and fæces were passed involuntarily. The head was raised, and kept up by means of a leather collar coming under the chin. In three weeks' time he could walk round the table, the sinus in the neck had healed, and he had regained control over his bladder and rectum. The patient is now fat and well, and can run about, though of course he wears the collar.

Dr. CARTER brought forward a case of Aneurysm of the Abdominal Aorta, and also read a paper on the Principles of the Artificial Feeding of Infants.

Phthisis.—Dr. FOXWELL showed a case of phthisis in a lad of seventeen, who, although his left lung was apparently riddled with cavities, with cavernous sounds also at the right apex, yet had but few symptoms, and continued to do his work, that of chandelier-making, without difficulty or complaint. He had presented himself at the General Hospital because of recent pain in the right axilla, where a little dry pleurisy existed. In June, 1885, he had previously come to Dr. Foxwell as an out-patient for a similar pain affecting the left apex anteriorly. The diagnosis then made was pleuro-pneumonia of the left chest, with an old cavity at the apex. It was interesting to note that this left apex was now the only part of the left lung where cavernous sounds could not be detected. This was no doubt owing to closure by fibrosis of the cavity existing three years ago. The largely uncovered condition of the heart was also in favour of the conclusion. During the three years and nine months intervening between his two visits to the hospital he had maintained good health and kept at work.

Dr. FOXWELL also showed cyrtometer tracings taken from two cases of Empyema at the levels of the second, third, and fourth ribs, after resection of these and lower ones. These exhibited remarkable degrees of collapse of the chest wall for such high horizontal planes, and illustrated the usefulness of resection of the upper ribs. There was very little falling of the shoulder in either case.

Hereditary Ataxia, or Friedreich's Disease.—Dr. SUCKLING introduced three cases of this disease. One patient, a girl aged eighteen, had noticed when she was about fifteen that she could not properly direct her feet; this inability gradually increased and soon affected the upper extremities. The gait was markedly ataxic, and there was much swaying when she stood with the feet close together, increased when the eyes were closed. There were tremor of the head and trunk and slurred speech. The knee-jerk was absent on both sides. The pupils responded normally to light and accommodation. She had not suffered from shooting pains, attacks of vomiting, or trophic changes. There was no affection of the bladder or rectum, and no disorder of sensation. The intellect was perfect. The spine was not curved, and there was no nystagmus. The patient's brother, aged twenty, had been taken to the Queen's Hospital to see Dr. Suckling, and it was found that he was quite crippled by the disease. He was first attacked when about thirteen, and used to stagger; this increased till he could not stand, and then the arms were affected. At the present time he was quite unable to stand, and motor power, though not entirely lost, was deficient in the legs. The spine was much curved forwards in the dorsal and cervical regions. The head and trunk showed tremor on movement. There was nystagmus on the eyes being directed to one side, and the speech was slurred. The knee-jerk was lost, but the pupils responded to light and accommodation. He had never had pains, crises of any kind, bladder trouble, or ocular paralysis. No further history of the disease in the family could be obtained. Dr. Suckling also showed two brothers suffering from the disease. The elder brother, aged twenty-five, was unable to stand, presented marked antero-posterior and lateral curvature of the spine, nystagmus, paresis with ataxy, and talipes equino-varus, the knee-jerk being lost. The younger brother, aged seven, was affected to a much less degree. The spine was beginning to be curved, and the knee-jerk was lost; the gait being also slightly ataxic.

Reviews and Notices of Books.

Joseph Rogers, M.D.: Reminiscences of a Workhouse Medical Officer. Edited, with a Preface, by Professor THOROLD ROGERS. London: T. Fisher Unwin. 1889.

THE form and face of Dr. Rogers will long be familiar to those who have taken an interest in medical and social politics for the last quarter of a century, and this book will serve to keep in mind the man and the conflicts in which it was at once his mission and his pleasure to take part. It is a really interesting, almost a fascinating book, that, once taken up, is not easily laid aside till it is read through—a process facilitated by the editor and the printer, who have both done their work admirably. How much more good reading we should have if we could always ensure such good paper and printing as constitute a feature of this work. It is fortunate for the memory of the late Dr. Rogers that he had a brother, Professor Rogers, who could so ably edit his memoirs, and introduce them with a criticism of our Poor-law system which is in itself valuable. Professor Rogers is a Liberal in politics, and so was his brother, with a large combative element in their composition, but they have been both careful to admit that in the great changes in the interest of the poor, and especially of the sick poor, which the last quarter of a century has seen, and which Dr. Rogers was a prime mover in bringing about, he had the help of both parties in the State and of all sections of the press.

The Reminiscences are divided into two great parts, entitled "The Strand" and "The Westminster Infirmary." We regret much that he did not favour us with a short chapter on his own earlier history and education, but it is

easy to see that a man like Dr. Rogers is born, not educated. His individuality is original and constitutional, and not due to any school or accident of training. We have no intention here to repeat at length the history of Dr. Rogers, or even of the two appointments which he held, and in connexion with which he fought so nobly the battles of the poor and of the Poor-law medical officers. This is rendered unnecessary by two facts: first, that we have lately published a full notice of his fruitful life; and, secondly, that the story is vividly told in his own forcible and living words, with many a thrilling story, in this book, which we most heartily commend not only to medical readers, but to all who wish to consider the case of the poor and to perfect the laws by which they are to be helped and the Departments by which such laws are to be administered. The splendid fearlessness with which Dr. Rogers—a Poor-law medical officer with £70 a year—exposed the peccadilloes of guardians and the easy indifference of the Poor-law Board and its permanent officials is one of the finest lessons of recent medical history, coupled with his tenderness and his minute trouble in helping the victims of misfortune or of bad laws, and in bringing their case to the notice of the public.

It is gratifying to us to think that THE LANCET co-operated heartily with Dr. Rogers in urging and bringing about the reforms for the need for which he was such a powerful and redoubtable witness. This co-operation is recognised both by the editor and the author of this book, and will be a pleasant consciousness to us as long as there are sick poor to be pitied and ratepayers and medical officers to be considered. Dr. Rogers's great idea was that the truest economy was to help the sick poor generously. Those only who saw their plight in the old workhouses and under the old sanitary conditions can fully realise the truth of this doctrine. But it had to be driven into the guardian mind and that of the permanent officials; and of all the names of men entitled to the credit of this difficult surgical operation none stands out more creditably than that of Joseph Rogers, M.D.

OUR LIBRARY TABLE.

Leprosy, an Imperial Danger. By H. P. WRIGHT, M.A., Rector of Greatham, Hants. London: J. & A. Churchill. 1889.—This is, we consider, a timely and valuable publication. The author has collated a large number of facts and statements by writers of unimpeachable accuracy and of experience in the disease dealt with; and the outcome of it all is to uphold the doctrine that leprosy is contagious, that it is spreading in India and our colonies, and that there is a possibility even, in these days of ready intercourse between all parts of the world, of its becoming again a scourge of the continent of Europe and of England itself. Indeed, without taking too alarmist a view of the prospect, it is quite clear that steps should be taken to sift anew the facts concerning leprosy, especially as the report of the College of Physicians to the effect that it was not contagious has so long been suffered to guide the practice of dealing with it in the colonies. We are glad that the College has expressed its willingness to aid the State in a fresh inquiry; but as the machinery of Government is slow to be set in motion, some attention may perhaps be given to the suggestion of the author to form a British Leprosy Association to "devise a reasonable scheme for the relief of lepers," and to suggest measures whereby the spread of leprosy may be held in check. We cordially support this suggestion, for we are more and more convinced of the need of a common plan of action based upon the opinion, which is receiving constantly fresh support, that leprosy is a communicable disease.

A Surgical Handbook for the Use of Students, Practitioners, House Surgeons, and Dressers. By FRANCIS M. CAIRD, M.B., F.R.C.S. Ed., and CHARLES W. CATHCART, M.B., F.R.C.S., Assistant Surgeons, Royal Infirmary, Edinburgh. With very numerous Illustrations. London: Charles Griffin and Co. 1889.—This is a thoroughly practical manual, well up to date, clear, accurate, and succinct. It deals with the treatment of patients before and after operations, hæmorrhage, shock, various surgical emergencies, bandaging, fractures, dislocations, the treatment of diseased joints, and many other matters, such as the application of trusses and the taking of casts. It is thoroughly trustworthy. The book is small, handy, and very well got up.

What must I do to get well? and how can I keep so? By One who has done it. Pp. 143. London: Sampson Low, Marston, Searle, and Rivington. 1889.—No name of author appears on the title page, but on the cover and at the end of the preface a lady or gentleman (most probably the former) named "E. Stuart" claims responsibility. The book is an exposition of the "Salisbury treatment," which it may be well to inform the uninitiated was the result of the "wisdom and research and long and varied experience" of Dr. Salisbury of New York, whose telegraphic address and address for letters are carefully given (page 22), with the time requisite before a reply to telegram or letter can be expected. The same gentleman (page 16) appears to be occasionally "in London." This little book is largely composed of extracts from his "masterly work" "The Relation of Alimentation and Disease," diluted with the writer's experience of rescue from the sad plight of being obliged for years "to eat my bread with tears and lie weeping on my bed through the long night hours in grief and pain." The treatment consists in sipping slowly four pints of hot water at a temperature of 110° to 130° F., which, we are assured, serves among other things to cleanse away "all the sour yeast, slime, and mess left" in the stomach after food, and ultimately acts as a "great beautifier and rejuvenator of the complexion." A minced beef diet *alone* is also recommended, while vegetables, puddings, pies, cake, and milk are to be avoided, although chutney is allowed. The book is enthusiastically written, and the writer does not shrink from declaring the system to be a "universal remedy and an infallible cure," although conscious that such a claim may be a temptation to the "hilarious and jocular." The royal road to health here described is merely a blind alley terminated by a glorified kettle.

The Law of Private Trading Partnership. By J. W. SMITH, Esq., LL.D., of the Inner Temple, Barrister-at-Law. London: Effingham Wilson and Co.—This little book contains in a very small compass the leading principles of the law of partnership, which are digested in the form of a series of brief and pointed paragrapha. Intended for non-legal readers, it dispenses with the copious references to authorities which characterise professional law-books, and becomes thereby much more readable by laymen, for whose use it has been prepared. Upon the same principle the author's statements of law are expressed, as far as possible, in good familiar English, and pruned of that exuberant technical jargon in which law-books for the most part abound. Altogether this "handy book" is well calculated to be of service to all who are involved in partnership transactions; and it hardly need be added that the law of professional partnership is involved in what Mr. Smith comprehensively describes in his title as "trading partnership."

Kalomel pri Vodiankakh i polostnykh vypotakh. Dissertatsia na stepen Doktora Meditsiny VLADIMIRA BUSHUËVA. (Calomel in Dropsies and Effusions into Cavities. Dissertation for the Degree of Doctor of Medicine, by VLADIMIR BUSHUËFF.) St. Petersburg. 1888.—This thesis, No. 18 of the series of Doctors' Dissertations in the Military Medico-Chirurgical Academy, St. Petersburg, contains

an account of observations on thirty-one patients in the wards of Professor Koshlakoff, whose house physician the author is; also a bibliographical notice showing some acquaintance with the writings of British physicians. A table is printed on page 12 giving the results of calomel treatment in different classes of cases as recorded by eighteen Russian and foreign observers. From this it appears that in cardiac dropsies 85 per cent. were benefited, in renal dropsies only 22 per cent. received any benefit, and in hepatic dropsies 37 are returned as improved. In effusions into the pericardium, pleura, and peritoneum, only 26 per cent. were benefited by calomel. The total number of cases collected in this table is 219. According to Dr. Bushuëff's own observations, which are pretty much in accord with those of other observers, though he has worked out the details more elaborately, calomel in large doses is a powerful diuretic, which acts best in cardiac cases, less in renal cases, and least of all in hepatic dropsies and effusions into serous cavities. He does not, however, recommend that it should as a rule be employed for its diuretic action, though there are cases—where other diuretics may have failed to produce the desired effect—in which it may be advantageous to have recourse to calomel.

Archiv für Dermatologie und Syphilis. Heft II. 1889.—This number contains an article by Szadek on the Treatment of Chronic Urethritis by Anointed Sounds, as recommended by Unna; a report by Elsenberg of Warsaw upon his investigations into the Nature of the Favus Fungus; the Treatment of Psoriasis by means of Hydroxylaminum Muriaticum, reported upon by Fabry, favourably upon the whole; but, as it is highly poisonous, the drug must be used with caution and restricted to a limited area at a time. In the last original article Pospelow concludes his elaborate paper on Extra-genital Infection with Syphilis.

Lichen Ruber, as observed in America. By R. W. TAYLOR, M.D.—This pamphlet is a reprint from the *New York Medical Journal* of Jan. 5th. It is a very careful and accurate clinical and histological study of two cases which occurred in the author's practice. He regards it as a disease totally distinct from lichen planus, and has drawn up a table showing how the two affections differ in numerous important points. Well-executed chromo- and plain lithographs illustrate the paper.

Giornale della Società Fiorentina di Igiene, pubblicato a cura del Consiglio Direttivo. Anno V.; Num. 1, 2, 3 del 1889. (Journal of the Florentine Society of Hygiene, published by the Directing Council.)—This carefully-edited periodical affords gratifying proofs of the advances made by Italy, since she became united and independent, in her truly national work of sanitary rehabilitation. We may indicate as worthy of special recognition the paper of Sebastiano Fenzi on Physical Education; the note of Giovanni Faralli on some Modifications of the Bill before Parliament for the better Safeguard of the Public Health; the report by Raffaello Zannetti on the New Regulations for Prostitution; the contribution by Aurelio Bianchi on the Slaughter of Animals by means of Electricity; and the article by Giorgio Marcacci on Poisoning by means of Sardines. The Journal also contains a *précis* of the Proceedings of the Society, annotations on Climatology and Demography, a section on Bromatologia Practica (Food in Theory and in Practice), and an elaborate review of contemporary progress in hygiene in foreign countries as well as in Italy.

A Guide to the Selection and Adoption of Orthopædic Apparatus, with a detailed Description of their Salient Points. By F. GUSTAV ERNST. Illustrated by 46 "Ink-photo" Plates and 71 Woodcuts. London: Sprague and Co.—The illustrations of this work are excellent. The descriptions of the instruments are also good, but the quasi-anatomical and pathological dissertations are valueless and out of place.

A Perpetual Calendar.—We have received from the Rock Life Assurance Company an ingenious contrivance, invented and arranged by the company's actuary, Mr. Crisford, which, by following certain intelligible instructions printed at the back, enables one by turning a circular disc round on a pivot between two diamond-shaped plates to form a calendar for any given month in any given year in any future century.

WE have received from the bureaux of the *Progrès Médical* a copy of Mr. Butlin's work on Diseases of the Tongue, which has been translated into French by Dr. Douglas Aigre. It is a simple translation, without notes or any editorial comments. We miss the illustrations which are a valuable feature of the English edition.

Analytical Records.

ST. HUBERT "IMPERIAL" AUSTRALIAN WINE.
(DE CASTELLA & ROWAN, MELBOURNE AND LONDON. LONDON OFFICE, LAURENCE POUNTNEY HILL, E.C.)

AUSTRALIA is rapidly rising to the level of France and Germany in the matter of wine. Every year sees an advance, and in place of the rubbish which was at first produced we now get wine of excellent quality. The wine now submitted to us is of the French class, full bodied, and of good flavour and bouquet. It is said to come from the St. Hubert vineyard, about twenty-five miles from Melbourne, and it certainly compares most favourably with any French wine of equal price with which we are acquainted. Our analysis gave in 100 parts by weight—extract 2·45; mineral matter, containing phosphates and iron, ·26; and alcohol 8·35, equal to 18 per cent. of proof spirit. Nothing but prejudice can retard the general use of such wine in England.

CHAMPAGNE GONIN, SPECIAL BRUT SELECTED, 1884.
(E. GOLDBERGER, SOLE AGENT, 1, OXFORD CIRCUS AVENUE, LONDON.)

Good dry champagne, in fine condition. The analysis yielded in 100 parts by weight—solid extract 2·87, sugar 1·40, ash ·095, and alcohol 11·38, equal to 24·69 per cent. proof spirit. The acidity was not excessive. The wine may safely be recommended.

CAMISOLE'S CHAMPAGNE IN SYPHONS.
(CARSWELL & CO., PICCADILLY-PLACE, LONDON.)

The advantage of being able to procure champagne in syphons is so obvious, especially for medical uses, that if metal fittings capable of resisting the acids, including the carbonic acid of the wine, can be obtained, many will be grateful for the innovation. We have examined Messrs. Carswell's fittings with great care. Both gold and silver are contained in the plating, and the metal heads resist the acids so perfectly that not only was no trace of metal found in the wine, but a severe experiment, in which one of the heads was exposed for days to air and carbonic acid, gave a negative result. Champagne stored in such syphons may be trusted.

UNGUENTUM LANOLINI (LANOLINE OINTMENT BASE), CONTAINING 30 PER CENT. CHEMICALLY PURE PARAFFIN OIL.
(BURROUGHS, WELLCOME, & CO., SNOW-HILL BUILDINGS, LONDON.)

This new ointment basis is prepared from the recently published formula of Mr. H. Helbing. It offers many advantages over ordinary bases, as it does not turn rancid, is readily absorbed by and is not irritating to the skin, and mixes readily with oils, fats, soaps, and water. We have verified the composition of the preparation by analysis. When the lanoline is saponified by potash the mineral oil remains unchanged, and is readily dissolved by ether.

LANOLINE ANHYDROUS (LIEBREICH).
LANOLINE ORDINARY (LIEBREICH).
(BURROUGHS, WELLCOME, & CO., SNOW-HILL BUILDINGS, LONDON.)

These preparations are substantially identical with those, now so well known, which we analysed and reported upon nearly two years ago. Their power of absorption by the skin and the ease with which they can be mixed with active chemical agents, such as iodide of potassium, are

now well recognised. The manufacture has been considerably improved, for lanoline is now whiter and altogether better than it used to be. The "ordinary" lanoline, which contains 23·4 per cent. of water, is most convenient for general use.

FRANZ JOSEF HUNGARIAN APERIENT WATER
(HERTZ & COLLINGWOOD, 101, LEADENHALL-STREET, LONDON.)

A very powerful Hungarian aperient water. It contains, according to our analysis, no less than 3676 grains per gallon of solid matter, of which the greater part consists of the sulphates of magnesium and sodium. A trace of manganese is present, and is readily detected by ordinary tests. It is a natural water of great interest and value, and will doubtless be extensively used.

ARMOUR'S MEAT EXTRACT.
(HERTZ & COLLINGWOOD, 101, LEADENHALL-STREET, LONDON.)

A powerful fluid extract from the factory of Armour & Co., Chicago. It is exported in kegs and bottled in England. It is an excellent preparation, acid in reaction, and only slightly turbid. On boiling it gives a distinct deposit. Good meat extracts, which are also cheap, are greatly wanted, for their use is daily increasing.

PEPTONISED MILK (PATENT CONCENTRATED).
(SAVORY & MOORE, NEW BOND-STREET.)

It is almost needless to say of Messrs. Savory & Moore's novelties that they are well prepared. This is an excellent article. In consistence it is like a thick cream, agreeable in flavour, and yet so well peptonised that it gives no coagulation with dilute hydrochloric acid, even after heating. It will be of great value.

PEPTONISED COCOA AND MILK (PATENT CONCENTRATED).
(SAVORY & MOORE, NEW BOND-STREET.)

This preparation is clearly founded on the last. In appearance it resembles chocolate cream, and it is delicate in flavour, and yet peptonised.

OLD IRISH REINDEER WHISKY.
(GOULDING & CO., LTD., CORK.)

Good, sound Irish whisky, sufficiently matured. The sample submitted to us contained 42·15 per cent. by weight of alcohol, equal to 87 per cent. of proof spirit, and only ·025 per cent. of acid.

ARMY VETERINARY DEPARTMENT.[1]

INTO the report of the Army Veterinary Department for 1888, which has just been published, Dr. Fleming has introduced two improvements: he has stated the sickness and mortality of horses and mules separately, except in the case of Natal; and has given a table showing the admissions, deaths, and castings in each month. The average strength of the army horses in the United Kingdom during the year 1888 was 13,020; the diseases and accidents amounted to 7782; the deaths to 262, of which 96 were "destroyed"; and the number cast and sold was 1094. These numbers give the proportion of 598 cases, 20·12 deaths, and 84·0 cast per 1000 of strength. The mules were only 251, among which the cases were in the ratio of 610, the deaths 23·90, and the castings 31·87 per 1000. The sickness and mortality of the two classes were therefore very similar, and the excess of casting of the horses was probably a result of the difference of age distribution, for we find there were 336 horses but no mules cast for "old age." The average number under treatment was 476, or 35·85 per 1000 of strength. These results, compared with the preceding year, show a marked decrease in the cases and casting, while the mortality in the two years was almost identical. The admissions ranged between 467 per 1000 of strength in the Household Cavalry and 785 in the Heavy Cavalry, and the mortality between 16·1 in the Royal Horse Artillery and 28·8 in the Heavy Cavalry. Comparing the three branches of the Cavalry of the Line, the admissions per 1000 were—in the Heavy 785, in the Medium 632, and in the Light 499; and the mortality was in the Heavy 28·8, in the Medium 23·7, and in the Light 17·6. The admissions were highest in July and lowest in December, and the deaths highest in July and lowest in November. Surgical diseases and accidents gave rise to much the greatest number of admissions, and next to them diseases and injuries of the locomotory apparatus. Respiratory diseases furnished upwards of one-eighth of the cases and the greatest number of deaths, which, however, was only slightly in excess of that from affections of the locomotory apparatus. One-half of the admissions in the class of respiratory diseases were from catarrh, and nearly one-fifth from "roaring." Pneumonia, pleuro-pneumonia, and pleurisy were the causes of two-thirds of the deaths in this class. Only two cases of glanders occurred during the year, both at Hounslow; the disease was believed to have been contracted in a stable at Ham, where the horses had been billeted on the march from Norwich to Hounslow. They were both destroyed as soon as it was detected, and the sanitary and preventive measures which were adopted were successful in limiting the disease. In view of the frequent prevalence of glanders in the East-end of London it has been decided, on Dr. Fleming's representation, that mounted troops will not in future be billeted nearer than Romford. There were 189 admissions for "roaring," with the result that 30 were relieved, 150 discharged "incurable," and 9 remaining under treatment. We are somewhat at a loss to understand these figures when taken in connexion with Dr. Fleming's report upon the operation for this disability. It appears that 60 horses were operated on at Newbridge, "but the results cannot yet be ascertained, as sufficient time has not elapsed"; and 103 were operated on at Woolwich, of which "the results are as yet but partially known." We are disposed to think that some of these cases refer to previous years, but it is not so stated. After giving some details of the results upon 59 horses belonging to various corps, Dr. Fleming remarks: "It will be seen by the above that 38 horses operated upon were cured, 9 were so improved as to be rendered fit for duty, and some of them are still improving, while only 12 were not improved, but some of them may yet become efficient."

The average strength of horses in Egypt during the year was 338; the admissions were in the ratio of 760, and the deaths, including destroyed, 35·5 per 1000. The mules averaged 180, with 644 admissions and 22·2 deaths per 1000. In both classes the admissions were considerably higher, but the deaths much lower, than in 1887. As in the preceding year, there were only one case of glanders and one of farcy among the horses, both of which were destroyed; and one case of glanders among the mules.

The returns for horses and mules in Natal are not kept separate. The average strength of the two was 668; the cases occurring among them amounted to 1049 per 1000 of strength, and the mortality to 122·8, the former somewhat above and the latter a little more than half the proportion in the preceding year. Of this very high death-rate, 77·8 per 1000 were the result of "horse sickness"—a disease peculiar to Africa. There were 56 cases of it, and 54 of them died. It still appears in the returns under the head of "Anthrax," although by the report of Mr. Nunn, who was sent out to investigate the subject, it appears to be a specific disease of a different character (*vide* THE LANCET of March 9th, 1889). In 1888 it prevailed at a much later period of the year than in 1887, the greatest number of cases having occurred in August and September, while in the preceding year the disease entirely ceased in June.

The Veterinary School at Aldershot continues to make progress. The number of officers who attended it was smaller than in 1887, but it has now been decided to make it compulsory for all officers of the mounted corps. During the year 121 farriers attended the class, and of these 114 passed the examination and only seven failed. An important step was taken in May in connexion with the subject of vaccination. An arrangement was made for a supply of calves from which to procure an ample quantity of pure animal vaccine for army vaccination, and the result has so far been very satisfactory.

Dr. Fleming reports very favourably of the working of the system of cold shoeing with machine-made shoes and nails. Some trials which were made during the year showed the durability of these shoes to be "exceptionally good." We need scarcely add that the report affords good evidence, as did its predecessors, of the very able and successful manner in which Dr. Fleming conducts the department of which he is the responsible head.

[1] The Annual Statistical and General Report of the Army Veterinary Department for the year ending Dec. 31st, 1888.

THE LANCET.

LONDON: SATURDAY, JUNE 15, 1889.

As the holiday season approaches, communications of various kinds regarding the health resorts of the country begin to flow in upon us and to demand attention. The questions arising in connexion with this subject are of great and increasing importance, inasmuch as the annual holiday is becoming every year more general, and the reasons for endeavouring to turn it to the best account are at least as urgent as ever. With the appearance also of new claimants upon our attention, the difficulties of choice tend to become greater rather than less. Before the new resorts, of which there are a large number, can hope to hold a place in the esteem of the public and of the medical profession, they should be able to show that they possess the indispensable conditions of a successful sanatorium. Of these, the most important are a favourable site, an abundant supply of pure water, efficient drainage, and adequate accommodation. As regards site, we need not dwell upon the importance of a sandy or gravelly soil and of abundant sunshine. Pure water is universally recognised as indispensable, and many favourite resorts have made within recent years laudable efforts to keep pace with the public expectations in this matter. Drainage has also been much improved, though hardly to an equal extent. It is disappointing and reprehensible to find that in some popular resorts the privy system still prevails. We trust the remonstrances which THE LANCET has made from time to time will soon procure its complete supersession by thorough arterial drainage.

Health resorts are naturally divisible into the two great classes of marine and inland; the latter being subdivided into mountain resorts, inland plain resorts, and spas. In all these types, with the single exception of mountain resorts, our own country is exceedingly rich. Our mountains are, for the most part, too low, and too liable to be begirt with clouds and deluged with rain, to afford good instances of the high-altitude resort, with the value of which in phthisis and other conditions the profession is thoroughly familiar. Buxton in England, and Pitlochry and Braemar in Scotland, are places where good mountain air can be obtained, though we must remember that they have really only a very slight analogy to such distinctly high-altitude resorts as St. Moritz, Davos, Wiesen, or Maloja.

Of marine resorts we have an unequalled variety. Our extensive coast line, broken up into countless inlets, affords sites for every type of marine sanatorium. Amongst a list that is practically without limit, we may mention the following. On the east and south-east coasts: Tynemouth, Whitby, Redcar, Scarborough, Filey, Skegness, Cromer, Yarmouth, Lowestoft, Clacton, Margate, Ramsgate, and Dover. On the south coast: Folkestone, Hythe, Hastings, St. Leonards, Eastbourne, Brighton, Worthing, Bognor, Cowes, Ryde, Ventnor, Bournemouth, Weymouth, Exmouth, Teignmouth, Torquay, Dartmouth, and Penzance. On the west coast: Rothesay, Dunoon, Grange, Blackpool, Southport, New Brighton, Rhyl, Llandudno, Barmouth, Aberystwith, Tenby, Weston-super-Mare, and Ilfracombe.

To understand the meteorological characters of these various resorts, we must remember the cardinal rule of the meteorology of the British Islands—viz., that the isothermal lines run rather north and south than east and west, and that hence latitude is a less sure guide to temperature than longitude. All the localities on the east coast partake more or less of the same meteorological character, although differing so much in latitude; and the same rule holds of the places upon the west coast. Thus Redcar and Scarborough have much more in common with Margate and Ramsgate than with places near their own parallel on the west coast, such as Grange or Southport. Similarly, the resorts on the south coast differ materially, according as they lie towards the east or towards the west. Speaking broadly, the east coast resorts are dry and somewhat cold, and hence bracing; whereas the west coast resorts are relatively humid, mild, and relaxing. The rainfall on the coast of portions of Yorkshire, Lincolnshire, Norfolk, and Suffolk hardly exceeds twenty inches per annum; while in Devonshire, Cornwall, and upon the Welsh coast it often reaches forty or fifty inches, and in some places largely exceeds that amount. All our coasts are somewhat windy; but there is a great difference between the dry, somewhat parching, and decidedly bracing wind which comes to our eastern coasts across the German Ocean, and the soft, rain-laden breezes of the Atlantic.

The above rule is, however, subject to exceptions, inasmuch as many places have a local climate of their own, depending upon conditions into which we cannot enter. Thus Southport and Llandudno, although on the moist west coast, are fairly dry resorts, and Ventnor and Bournemouth are much drier than their geographical position would render probable.

The south coast resorts, the most patronised of all, present a wide diversity of character, which is much better explained by longitude than latitude. Thus all the Kentish and Sussex resorts are bracing, while those of Devon and Cornwall are more or less relaxing. If we must fix any arbitrary line of division, we might say that all the south-coast resorts to the east of the Isle of Wight are fairly bracing, those to the west of this point somewhat relaxing. We must make a distinction between the north and the south coast of Devonshire, the former being less relaxing than the latter. The word "relaxing" is an unfortunate one, as it seems to imply some stigma; but we must use it in default of better, always understanding by it a certain mildness and humidity of the air, which is often undesirable, but frequently most suitable to many conditions.

To sum up, the most bracing marine resorts in England are those of Durham and Yorkshire; the most relaxing are those of Devonshire and Cornwall. The resorts from the mouth of the Thames to Brighton form an intermediate class, and their popularity is easy to understand and rests upon a solid foundation.

In spas this country is also very rich. Examples of sulphur waters are found in Harrogate, Moffat, and Strathpeffer; simple thermal waters in Bath and Buxton; muriated saline

waters in Droitwich, Woodhall, Leamington, and Cheltenham; and iron waters in Tunbridge Wells and Harrogate. Our brine baths are unsurpassed in the world; the simple thermal and earthy waters of Bath are perfect in their way; and our sulphur springs, as at Harrogate, are excellent. The weak point of the British mineral waters is their deficiency in carbonic acid gas, and the absence of the saline aperient class, which makes the fortune of Carlsbad and Marienbad. We shall return shortly to the subject of the British health resorts, and recall to the minds of our readers the principles which govern their adaptability to various types of disease.

A VERY able address was delivered at the Intercolonial Medical Congress by COSBY W. MORGAN, M.D., health officer of the Port of Newcastle, New South Wales, on the subject of State Medicine in this colony, which has a population of nearly a million, and which, from its great importance in the Australasian system, might be expected to treat medical questions of State and the medical profession with more respect. It is an unfailing sign of advancing civilisation when a community shows an appreciation of Public Health and of the Profession of Medicine. According to Dr. MORGAN, New South Wales is backward in these regards. There is neither a Public Health Act, such as obtains in Victoria, South Australia, Queensland, Tasmania, and New Zealand, nor is there a Medical Practitioners Act, which defines the status of the medical profession or confers such privileges on the legally qualified as they possess in the United Kingdom. Our readers at home think their privileges scanty enough, but what would they think of the evidence of unqualified practitioners being taken as that of experts at coroners' inquests and in courts of law, even in courts of Assize, where questions of life and death are determined. Yet Dr. MORGAN gives a case where, with great difficulty, the Governor was induced to commute a capital sentence in a case of rape, based on the loose and ignorant testimony of an unqualified witness. Instances are numerous in which club, hospital, and other appointments are held by unqualified persons. And, most discreditable of all, the Government frequently places an unqualified man on the Commission of the Peace, or appoints him a Coroner in a country district. The extreme disrespect for life and health displayed in such action by the responsible Government is without excuse. We cannot believe that the public men of New South Wales can realise what this means in country districts, where suffering and disease are the same as in Sydney, but without the same resources. Such absence of medical laws discourages medical education. It punishes educated medical men, but it does not punish them so much as the community which so neglects one of its primary duties. The Lunacy Act is supposed, by its interpretation clause, to require that medical men certifying be properly qualified, but Dr. MORGAN has recently seen a case in which the certificate was signed by an unqualified medical man, "being also a justice and a coroner"! So with certificates of death. Things are not much better with regard to laws designed to guard the public health. There is no Compulsory Vaccination Act, and Dr. MORGAN questions whether one-third of the infant population of the last ten years is vaccinated. Laws for the removal of nuisances or excreta are absurdly ineffective, as was shown in a case where the authorities of Newcastle kept depositing the contents of cesspools on one public ground after another till the slow action of the law stopped the public nuisance. Dr. MORGAN puts this state of matters down to the discredit of municipal government and the want of a strong central authority to compel observation of the first laws of health. Municipal representatives are apt to be local property owners, and to be more bent on the improvement of the value of their property and the reduction of their rates than on the reduction of the death-rate. The same municipal shortcomings in matters of sanitation are to be found, it is alleged, in other parts of Australia and New Zealand. We commend the complaints of the medical profession of Australia to the statesmen and intelligent classes of these great Colonies. In Victoria we know, from a recent meeting of medical societies, that quackery is impudent and extortionate. Nobody expects it to be absolutely put down, but every community should have the means of knowing who is an educated practitioner and who is not, and the Colonies, though for the present uncrowded, have the same liability to bad epidemics, or even worse than the mother country, and the same need for preventive medicine and its honourable recognition by the State. They are exposed to the introduction of cholera, yellow fever, smallpox, and the like. Their constant epidemics are extremely virulent—such as enteric fever, diphtheria, and scarlatina. They have outbreaks of erysipelas and septicæmia. And they cannot afford to ignore sanitary science or the profession which represents its application to individuals and communities.

AMONGST the papers recently issued by the Medical Officer of the Local Government Board is one on the Geographical Distribution of Diphtheria in England and Wales,[1] by Dr. G. B. LONGSTAFF, whose contribution is based on a careful investigation which he has made as to diphtheria statistics since 1855, when that disease first appeared in the returns of the Registrar General.

Taking the whole period under investigation—namely, the twenty-six years 1855–80,—it appears that more females die of diphtheria than males by about 12 per cent., whereas the number of females living exceeds that of males by 5 per cent., so that an excess amounting to 7 per cent. remains which cannot be accounted for by the disparity of the sexes in the general population. Taking the age at death, 57 per cent. of the male diphtheria deaths and 51 per cent. of the female deaths occur in the first five years of life; 25 and 29 per cent. respectively take place in the next five years; whereas after the age of forty-five only 2½ and 2 per cent. take place respectively.

Allotting the diphtheria mortality to the great registration divisions of the kingdom, Dr. LONGSTAFF points out that the South-Western, the South Midland, and the Northern divisions have always experienced a low mortality. The North-Western and the London divisions have also not suffered much during the whole period under consideration, but in the last portion of that period—namely, 1871–80,—the mortality rose above that from diphtheria in England

[1] Supplement in continuation of the Annual Report of the Medical Officer of the Local Government Board for 1887. [C—5638.] 1889.

and Wales as a whole. These two last-named divisions, with a comparatively low diphtheria mortality, have the highest general death-rate, and are by far our most densely populated divisions. The West Midland and the South-Eastern divisions have had a diphthera mortality above the average, and in two out of the three periods into which the twenty-six years are divided the Welsh and Eastern divisions suffered an excess; the North Midland division has also, on the whole, suffered most of all. These five divisions, be it noted, have a comparatively low general death-rate, and apart from the West Midland division they have a rural instead of an urban population. Indeed, rural life is shown not to be unfavourable to fatal diphtheria, whereas the disease does not indicate any proclivity for densely peopled districts. Coming to the counties, much the same results are shown. Metropolitan Middlesex, ex-Metropolitan Middlesex, Metropolitan Surrey, West York, and Lancashire, for example, have high general death-rates, they are especially densely populated, and they have been distinguished over more or less lengthened periods for a comparative immunity from diphtheria.

Comparing diphtheria mortality, in the next place, in town and country districts within the same county for the period 1855–60, Dr. LONGSTAFF having grouped his districts into "dense," "medium," and "sparse," as regards their populations, finds that, whilst there are twenty-five counties in which dense districts can be compared with medium districts, the diphtheria mortality was highest in the medium districts in no less than twenty instances. In thirty-two counties he could compare medium with sparsely populated districts, and in twenty-eight of these the sparse districts suffered most. And, lastly, in twenty-nine counties comparison can be made between dense and sparse districts, with the result that in no less than twenty-six the sparse districts suffered most. Taking England and Wales as a whole, the diphtheria deaths per million living were 123 in dense districts, 182 in medium districts, and 248 in sparse districts. During a second period—namely, 1861–70—the results, though similar, are less striking; the corresponding rates for England and Wales being 163, 164, and 223 per million living respectively. And in the third more recent period, 1871–80, the results, though again similar, are still less striking; the corresponding rates per million being 114, 125, and 132 for dense, medium, and sparse districts respectively. But, assuming 100 to represent the average diphtheria mortality for the three periods in dense districts, that for medium districts is represented by 118, and that for sparse districts by 151.

We have more than once within recent years called attention to the increasing incidence of diphtheria in towns; and the statistics published by Dr. LONGSTAFF, whilst still showing that the disease in its fatal form is essentially one affecting rural populations, points to the important fact that in each succeeding decade the towns have, relatively to the rural districts, suffered more and more. The increasing immigration into urban centres, the multiplying means of communication between country and town, may to some extent account for this; but these conditions alone do not offer any sufficient explanation, and whilst diphtheria still clings mainly to our village communities, the reverse is the case as regards such diseases as measles, scarlatina, and whooping-cough. Statistics of non-fatal cases might tend to clear up the difficulty; but not only is there an absence of any sufficient data as to such cases, but even where diphtheria is included in the list of diseases which come within the compulsory clauses of Acts requiring notification, the extent of the prevalence of that disease is often altogether masked by the amount of sore throat (more or less infectious) and of such diseases as "croup," which occur synchronously with the attacks of recognised diphtheria. How far the connexion of diphtheria in the human subject with some allied affections in the lower animals may have some influence in maintaining the cause and facilitating the spread of the disease in rural areas must also at present remain uncertain; but whatever the explanation may be, we have now abundant evidence to show that very many of our largest towns have suffered but little from diphtheria mortality, whereas many of the districts which have suffered most have been those in which the populations live mainly in scattered villages or in small country towns. In short, death from this disease is clearly not induced by the same causes as influence general mortality, and certainly density of population does not favour it, and this although children, who are most liable to attack, are more numerous in urban than in rural districts. Together with this fact we also find that the cause of diphtheria, whatever it may be, is gradually becoming more and more operative in our urban areas.

THE report of the Royal Commissioners not only recommends that the University of London should be so modified as to become a Teaching University, but enters very fully into the methods by which this transformation should be effected. In the main, the scheme of the Royal Commissioners follows very closely that drawn up by Lord Justice FRY'S Committee in 1885, which was rejected by Convocation on the motion of Sir PHILIP MAGNUS on Nov. 3rd, 1885, by a majority of 44 votes (Noes, 122; Ayes, 78). In that scheme, the University was to consist of—(1) Senate; (2) Convocation; (3) Constituent Colleges; (4) Faculties; (5) Boards of Studies; with the Queen as Visitor. The Constituent Colleges were to be "in or near London." The feeling of Convocation was very strong against this limit, and in the next scheme, presented by Sir P. MAGNUS in May, 1886, "any other institutions or colleges not affiliated to any other University" are expressly included. The report, however, very definitely insists that "the teaching institutions of a University of London, in the proper sense of those words—a University intended to have, as to teaching, a proper metropolitan character—ought, in our judgment, to be in or near London. For other parts of the kingdom it is sufficient that there should be access, as heretofore, to examinations and degrees." The opinion of the Commissioners is evidently as strongly in favour of reconstruction of the University on a local basis, so far as teaching institutions are concerned, as was the expression of Convocation against any such limitation of constituent Colleges. Not only is this the case, but University and King's Colleges are to be at once admitted as constituent Colleges, as having fully shown just claims to be so admitted. Institutions limited to the study of a

single Faculty may be "associated" with the University in respect of that Faculty, and under this head the metropolitan medical schools unconnected with University or King's Colleges would be admitted; whilst examining bodies which do not teach—such as the Royal Colleges of Physicians and Surgeons, the Council of Legal Education, and the Incorporated Law Society—may (if willing) be connected with the University by means of some representation on its governing body. The miscellaneous teaching bodies, such as the Birkbeck Institution, the Working Men's College, &c., which are so numerous in London, and whose inclusion as colleges was one of the blots in Sir EDWARD FRY'S scheme, are altogether left out of consideration by the Royal Commissioners.

The influence of the teachers in all the schemes introduced by the University of London was, in the opinion of the Commissioners, not sufficiently recognised, being either neutralised by their small representation on the Senate on the one hand, or by the large share of power given to Convocation on the other. It is therefore proposed that the "Faculties," consisting exclusively of teachers, should directly elect twelve members of the Senate out of a total number of thirty-eight; the other twenty-six being made up of ten Crown nominees, of ten elected by Convocation, and of the six following—viz., the President of University College, the Principal of King's College, the nominees of the Royal Medical Colleges, the Council of Legal Education, and that of the Incorporated Law Society. Such a Senate would undoubtedly be a great improvement on the Senate of the University as now composed, so far as an acquaintance with the needs and duties of a Local University are concerned, and it treats the teachers far more fairly than has been proposed in either of the other schemes. Indeed, the recently proposed reconstitution of the Senate, as framed by its special committee, is declared to be "inadequate to the importance of the teaching element, in a teaching as well as an examining body." But even the plan drawn up by the Commissioners seems to us to be faulty in giving so large a proportion as ten seats to the nominees of the Crown, but we suppose that these must be introduced whilst the University draws funds from the Treasury. There should, therefore, be a clause in any new Charter which would provide for the University becoming self-managed, as soon as it becomes self-supporting, or has allotted to it a fixed annual grant, as is the case of the provincial and Scottish Universities. Boards of studies for consultative purposes only are to be formed jointly from the Faculties, by Convocation, and from the examiners; and the University is to have power to "teach by professors and lecturers of its own, attached or unattached to particular colleges or institutions, and to receive endowments for that purpose." The examiners in each Faculty are to be chosen by a standing committee for that Faculty, not exceeding twelve in number, of whom the representatives of the Faculty on the Senate should always be three. Lastly, the Commissioners declare that it is desirable that the Charter, by which the constitution of the University of London is to be remodelled, should come into operation *on an early day* to be fixed by the Charter itself, and not be postponed till the respective terms of office of the existing members of the Senate would, under its present constitution, have expired. The present Senate, composed of thirty-six Fellows, of whom two-thirds are Crown nominees, and one-third elected by Convocation, is therefore invited to perform the "happy dispatch," and that quickly.

In pointing out the chief features of the new proposals, we cannot but express a feeling that the Royal Commissioners have shown a very wise liberality towards the teaching element; and if a modification of the existing University must take place, the scheme suggested is a fair compromise between the teaching and the examining sections; but we must again state our decided opinion that a new Teaching University, on the model of the Victoria University, with the existing University of London pursuing its admirable work on its present lines, would have been a solution of the problem on a far more satisfactory basis than the cumbrous scheme described above. It will be seen that even in the new proposals the vicious system of election for life of Crown nominees, of nominees of Convocation, and of nominees of Faculties will be perpetuated.

Annotations.

"Ne quid nimis."

DIARRHŒA MORTALITY IN LEICESTER.

LEICESTER has long been a principal centre of interest in so far as the causation of fatal summer diarrhœa in children is concerned; it has afforded means for some of the more important experiments on which Dr. Ballard's recent conclusions have been based; and ever since Dr. Tomkins commenced his work there as medical officer of health this disease has been one of the main subjects to which he has devoted his attention. Prominence is once again given by him in his recently issued annual report to the causes of this diarrhœa mortality, the circumstances of 1888 being set forth in so far as this disease is concerned. The summer of that year was marked by absence of bright sunshine and of high temperature, and rain was somewhat continuously present during the months of July and August; and, in view of these circumstances, the diarrhœa deaths were much less numerous than usual, and any marked prevalence of the affection was deferred until a later period than is common to the town. But, for all this, Preston alone exceeded Leicester in the diarrhœa death-rate. Looking at the various towns attacked, Dr. Tomkins notes how largely the period varied at which the highest diarrhœa mortalities were reached, and he reverts to his opinion, formerly expressed, that the onset of the disease is largely dependent on the temperature of the soil at one foot deep having reached 60° F. On this point he enlarges, and he appears only to differ from Dr. Ballard in so far as the latter is of opinion that the summer rise of diarrhœal mortality does not commence until the mean temperature recorded at a depth of four feet has attained somewhere about 56° F., "no matter what may have been the temperature previously attained.....by the one-foot thermometer." This four-feet temperature was, according to Dr. Tomkins' tables, reached in Leicester during the last week of August, and it was maintained or exceeded up to the last week in September, the maximum diarrhœa mortality occurring in the week ending September 8th, and the four-feet earth temperature having during the preceding three weeks been 57° F., or more. Comparison of district with district in this respect is of the utmost value, and Dr. Tomkins' data as to this are again so set forth as to aid in elucidating the facts bearing upon the causation of

this disease. Experiments relating to the condition of the air collected in certain districts, and to the number and character of the contained organisms on the sixth and eleventh days after collection, show that the organisms were more numerous and of more marked characteristics in the case of air collected early in September as compared with that collected early in August. Similar investigations were made as to organisms in soil, and Dr. Tomkins finds confirmation of his previous opinions, to the effect that there is a polluted condition of the soil, especially in the lower parts of Leicester, and that in the districts where, and at the time when, diarrhœa most prevails, the atmosphere is contaminated with enormous numbers of microbes and their germs. He is further of opinion that these microbes probably act as principal agents in the causation of the disease. Some of the microbes found are admittedly of a sort not known to have any special pathological significance; but Dr. Tomkins gives a plate of certain bacilli, which he is inclined to regard as being the principal factors in the production of epidemic diarrhœa. How they act is not known. It may be more or less directly, or more probably indirectly, by the manufacture of a virulent chemical poison. It is evident that Dr. Tomkins intends, as occasion offers, to continue his researches into this and other parts of the subject.

SUDDEN AND FATAL ILLNESS OF DR. LEONARD CHARLES WOOLDRIDGE OF GUY'S HOSPITAL.

ON Wednesday, May 29th, after attending his outpatients at Guy's Hospital, Dr. Wooldridge took an anchovy sandwich and a glass of sherry. Two hours afterwards he was seized with giddiness and faintness, and in the night with severe diarrhœa, which he at once attributed to the anchovy sandwich. On May 30th, 31st, and June 1st he complained of lassitude, but went about his ordinary pursuits without much difficulty. On Sunday, June 2nd, he had to lie about all day, and in the evening suffered from retching. On Monday he lived chiefly on slops, continuing his work at the hospital and taking no medical advice. On Tuesday, after working at the hospital till 12 o'clock, he went by the 12.45 train to St. Leonards, returning about 9 P.M. He seemed brighter in spirits, but said he felt no better. On Wednesday he attended his outpatients as usual, and the pains in the limbs and joints from which he had been suffering at intervals for a day or two greatly increased. Sir Edward Sieveking saw him before 4 P.M. on Wednesday. His temperature was normal, and a careful examination exhibited no symptoms of an alarming character. He was violently sick after dinner, and the pains in limbs and joints ceased, so that he remarked, "the pains and sickness seemed to alternate." At 6 A.M. on Thursday, June 6th, he awoke after a fairly good night, and took cocoa and bread-and-milk; attended the hospital in the morning, but, feeling too ill to finish his work, returned home, telling his students to send for him in case of urgency. At a quarter to two Dr. Frederick Taylor came to see him, advised his going to bed, thinking, as Sir Edward Sieveking had done the day before, that he was chiefly suffering from gastro-intestinal irritation, the effects of which were intensified by his being overworked. Dr. Taylor directed that he was to have only liquid food. Within ten minutes of going to bed, whilst talking cheerfully to his wife, who was by his side, he suddenly changed colour, fell back, and expired. At a post-mortem examination, which was made on Friday, June 7th, by Dr. Newton Pitt, the stomach and duodenum were found to be much congested and ecchymosed, while throughout the whole of the colon were numerous small superficial follicular ulcers. There was slight but undoubted dilatation of both ventricles of the heart. It would therefore appear that the morbid state of the stomach and colon produced in his exhausted condition a cardiac dilatation, which proved fatal from syncope. The funeral took place on Wednesday, June 12th. The hearse started from the quadrangle at Guy's Hospital at 1.30 P.M. The interment took place at Norwood Cemetery at 3 P.M. Among those present were Sir Edward Sieveking, Dr. William Wood, Miss E. Sieveking, Mr. H. Sieveking, Mr. A. Forbes Sieveking, Mr. A. Wood, Professor Burdon Sanderson, Dr. Wilks, Professor Horsley, Dr. Beevor, Dr. Pavy, and Mr. Durham, and all Dr. Wooldridge's other colleagues on the staff of Guy's Hospital Medical School, together with two or three hundred students.

SUPPURATION OF THE SALIVARY GLANDS.

AN interesting and important contribution has recently been made to the pathology of the remarkable form of inflammation of the salivary glands—most commonly the parotid—which sometimes occurs in the course of specific fevers or septic inflammations in other parts. The association of parotitis with abdominal inflammatory disease is well known. The condition has generally been attributed to metastasis or pyæmic infection; but this is not the conclusion arrived at by A. Hanau (Ziegler's and Nauwerck's Beitrage, Bd. iv., Hft. 5) in his paper on "The Origin of Suppurative Inflammation of the Salivary Glands." He describes five cases of the disease, all but one being cases of parotitis, occurring in (1) pneumonia, (2) pyo-salpinx with peritonitis, (3) phthisis with thrush, and (4) a specimen of bilateral "metastatic parotitis" in pyæmia. The fifth case was one of suppuration of the submaxillary glands with perityphlitic abscesses. The histological examination of these specimens showed that the inflammation commenced in the ducts of the gland, and masses of micrococci could be seen mingled with the pus, which filled these ducts and destroyed the gland substance in the more advanced stages. Hence it was inferred that the gland was infected from the mouth, and that its involvement had nothing to do with metastasis from a primary focus elsewhere in the body. The cases are therefore comparable with purulent infiltration of other glands—e.g., pyelonephritis, acne, and mammary abscess in the puerperal state. Further reasons for this view are adduced in the fact that, in some cases—e.g., pneumonia and typhoid—there may be no primary suppurating focus, and also in the presence of septic cocci in the inflamed parotid, whilst the primary disease may be due to a different microbe. The disease only occurs in severe cases, and there is no essential difference between so-called metastatic parotitis and that following on stomatitis (Virchow, Orth). Then the affection is often unilateral, and if bilateral the two glands are probably not involved to an equal extent, as is the case with a disease of systemic origin—e.g., nephritis. In the less advanced degrees of inflammation the suppurating foci are distributed as in pyelonephritis. Moreover, it is observed that parotitis is often preceded by vomiting and by other conditions tending to make the buccal cavity impure, the most dangerous being cases of fæcal vomiting; whilst in some cases there is a direct connexion with stomatitis or thrush, even where clinically some support might be given to the metastatic doctrine. Dr. Hanau points out that in health Garré has shown the presence of some pathogenic organisms such as the staphylococcus aureus amongst those found in the buccal secretions, and states that these microbes increase in number in the fertile state. It is possible, too, that in septic conditions such organisms may pass out of the blood-vessels into the mouth. At any rate, in conditions where the flow of saliva is checked there will probably be an accumulation of such organisms and the main salivary ducts be blocked, the position of Steno's duct

favouring the involvement of the parotid gland. In an appendix the author refers to a thesis by H. Müller on the Etiology of Parotitis (Halle, 1883), where there was clear evidence of infection from the mouth. Hanau also adds a case of acute inflammation of the sublingual gland, where he could trace the course of micro-organisms through the duct walls into the surrounding lymphatic tissue.

THE UNITED STATES CENSUS IN 1890.

THE Act for taking the eleventh and subsequent censuses in the United States was approved by Congress in March last. As the arrangements for taking the tenth census of the United Kingdom are now under the consideration of the Government of this country, and are more or less under general discussion, it is not without interest to consider briefly a few of the more important provisions of the United States Census Act. It is provided that the census of "population, wealth, and industry" shall be taken on June 1st, 1890. A Census Office is to be established in the Department of the Interior, the chief officer of which is to be the superintendent of the census, with an annual salary of £1500. On or before March 1st next a supervisor of the census is to be appointed for each State or Territory, the number of whom shall not exceed 175. Each supervisor is to divide his district into subdivisions, and for each subdivision an enumerator will be appointed, the supervisor being responsible for supplying his enumerators with all necessary schedules and instructions. In the United Kingdom the householders' schedules are left at each house previously to the census day, the responsibility for filling up these schedules being thrown upon the heads of families; and upon the census day the schedules are collected by the enumerator, who is bound to see that they are duly filled up. In the United States, however, the enumerator, in the words of the Act, "shall visit, personally, each dwelling-house and family, and individual living out of a family, to obtain the several items of information." In other words, the American enumerator has to obtain the necessary information and fill up the schedules himself. The expense of such an enumeration is naturally very largely in excess of one carried out on the English system; but, on the assumption that intelligent and trustworthy enumerators are appointed, the accuracy of the information collected may probably exceed that of the facts supplied by the heads of families direct. The Act provides that the American enumerator may either be remunerated by allowances based upon the number of living inhabitants, of houses, of farms, of industrial establishments, and of army, navy, or marine pensioners enumerated; or by payment per day of ten hours, which is not to be less than 12*s.* or more than 24*s.* It is provided that the population of the district assigned to each enumerator shall not exceed 4000 persons, as near as may be. Provision is also made for the employment of "experts," on a salary not exceeding 24*s.* per day, for the collection of manufacturing, mining, and social statistics, as well as statistics of fishing, cattle, insurance, and transportation industries. The 19th section of the Act ordains that the enumeration shall be completed on or before July 1st, and in cities having in 1880 a population exceeding 10,000 persons within two weeks of the first Monday in June. Neglect or refusal to perform duties are to be punished by certain defined penalties; and "every person more than twenty years of age is required to render true accounts of every person belonging to the family, and on refusal incurs a liability to a fine not exceeding £20." Refusal on the part of officers of corporations to answer questions submitted to them will subject them to a fine not exceeding £2000, to which may be added imprisonment for a period not exceeding one year. It is lastly enacted that the maximum cost of the census, exclusive of printing, engraving, and binding, shall not exceed £1,280,000—a sum more than ten times the amount expended upon the census of the United Kingdom in 1881. Having regard to the nature and extent of the English census in 1891, now under consideration and discussion, it is well to note, with regard to the United States Census Act—(*a*) the wide field of investigation provided for by the Act; (*b*) the liberal, not to say lavish, provision for expenses voted by Congress; (*c*) the fact that the schedules are all filled in by the enumerators, instead of by the heads of families, as in England; and (*d*) the large powers given by the Act for enforcing the supply of information, which in England would probably be resented as too inquisitorial. Finally, we may point out that the forms of the schedules are not included in the Act, which only provides that the schedules of inquiries shall be similar to those employed in the tenth census, "it being the intent of this section to give to the said secretary of the Department of the Interior full discretion over the form of the schedule." In view of the influence of party political patronage upon Civil Service appointments in the United States, it does not seem altogether certain that the census machinery of supervisors and enumerators will be selected with sufficient regard to their special fitness for their important and responsible duties, and it is easy to see that the trustworthiness, and therefore the value, of the census of the United States will entirely depend upon the industry, intelligence, and honesty of the enumerators.

ABDOMINAL SURGERY IN ITALY.

AT the Sixth Congress of the Italian Society of Surgery, held at Bologna in April under the presidency of Professor Loreta, the majority of the papers read referred to questions of abdominal operations (*L'Union Médicale*, No. 68). Signor Ceccherelli dealt with the subject of surgical treatment of tubercular peritonitis. He has had four successful cases, and collected details of eighty-six, with fifty-two recoveries, twenty-five deaths, six cases of improvement, and five in which the results are unknown. He said that operation was useless in the *dry form*, owing to the universal adhesions; but that its value lay in the treatment of the *ascitic form*, the "cure" being attributed to the evacuation of the fluid provoking an adhesive peritonitis, with fibrous transformation of the tubercles. Nevertheless, he admitted that the "cure" was only temporary, life being perhaps prolonged for eighteen months or two years. Professor Ruggi gave statistical results of 115 laparotomies, with only eight fatalities—viz., salpingectomy (one death in fifteen cases), supra-vaginal amputation for fibro-myomata (five deaths, twenty-four cases), laparo-hysterotomy for sarcoma (one case fatal), and extirpation of parametric cyst (two cases, one death). He discouraged the use of intra-peritoneal injections of sublimate, attributing one death to its absorption. Battey's operation was advocated by MM. Clement and Bassini in cases of metrorrhagia and uterine tumours which resisted other measures; but M. Bottini would restrict it to cases of "grave hysteria," asking why, in cases of uterine lesions, since the abdomen must be opened, the uterus itself should not be removed. Trombetta and Durante claimed for electrolysis a superiority in such cases over oöphorectomy. M. Postempski analysed twenty cases of laparotomy for the treatment of penetrating wounds of the abdomen; of eighteen in which the intestine or mesentery were injured there were only three deaths, and a case of wound of the liver and one of the bladder also recovered. The same surgeon recorded a successful case of radical cure of a diaphragmatic hernia (the omentum protruding through a wound in the diaphragm) in spite of pneumothorax. MM. Durante and Trombetta gave details of two cases of

extirpation of the cæcum, where chronic perityphlitis had been mistaken for cancer. One case recovered. M. Bassini mentioned a successful case of extirpation of the colon for adenoma. Splenectomy was performed by M. d'Antona on a child of three years, who recovered from the operation, but died from tubercular meningitis five months afterwards. MM. Fussi and Ceci had also had successful splenectomies. Loreta's operation of dilatation of pyloric stricture has been again twice successfully performed by him. The criticism passed by MM. Bottini and Putti that the measure could only afford temporary relief, since all strictures return after mechanical dilatation, was met by M. d'Antona, who affirmed that the pylorus could not be compared to the urethra or œsophagus, but rather to other sphincters which do not contract after dilatation; and M. Poggi stated that in all the instances of Loreta's operation the results were permanent.

SCHOOL TREATS.

AT this time of the year committees and managers of schools are in the habit of collecting funds to procure a day in the country for many of the poor children who flock to the schools and play in the streets. As an educational project this custom is sufficiently commendable, since it corrects many false impressions of the country derived from books and illustrated papers; but from the health point of view it may frequently be questioned whether the day's enjoyment is not too dearly purchased. These school treats have to be planned some time beforehand, so that there is no certainty of fixing upon the ideal day. The variability of our climate has to be reckoned with, and through June and July there is the possibility of excessive heat or of rain and cold winds, either of which may be enough to cause many to regret having spent the day in the country. The feeding of the children is mostly provided for with sufficient liberality, but their clothing should also be looked to, and they must be under the charge of judicious management which can retain remembrance of hygienic laws even when the fun is at its height. The doubtful benefits of the day may be easily converted into real dangers if a game at romps is encouraged before the children return home by rail or road. They are then only too apt to become over-heated, and it is very rarely that they take any warm wraps or other protections against exposure and chill. The recent lamentable loss of child life in Ireland which occurred on one of these occasions was due to a cause wholly beyond the control of the teachers.

PATHOLOGY OF DENTAL CARIES.

DR. MÜLLER of Berlin, who has been for some years past engaged in bacteriological research, notices of which have from time to time appeared in these columns, is convinced that caries of the teeth is entirely due to parasitic action, and that it is not an inflammatory process. Messrs. Mills and Underwood, of this country, were, we believe, the first to point out that the dental tubules in caries were filled with micrococci, but Dr. Müller has studied the subject more minutely. His first series of experiments showed that the acid-forming ferment in the mouth was capable of self-reproduction, and must therefore be of organic origin—and not, as in the case of ptyalin, an unorganised ferment. Next he proved that the organisms causing caries were anærobic; and he further obtained a pure culture, a portion of which, introduced into a tube containing a fermentable mixture, became acid in a few hours, and in two weeks decalcified a portion of a sound tooth, the microscopical appearances being precisely those of ordinary carious dentine. Against the theory of the inflammatory origin of caries he argues that there are none of the cardinal signs of inflammation present, and the methods which would cause inflammation of other living tissues fail to produce caries. The very operation of filling teeth, he says, is an argument against the inflammatory theory. If we were to bore a hole in the soft tissues or in bone, and hammer into it a plug of gold, it would in most cases be thrown off by suppuration. Caries of dead dentine and artificial caries are perfectly analogous with caries of living dentine, and he maintains that there are no changes in the structure of dentine where micro-organisms are not present.

THE HEALTH OF LEO XIII.

FROM Rome a correspondent writes:—"True to some mysterious law of periodicity known only to the 'political meteorologists' of continental bourses, the health of the head of the Catholic Church reappears among the items of disquieting news. Leo XIII., it seems, is far from well; indeed (for there is nothing like particularity in these matters) his illness has culminated in a 'paralytic seizure.' May I be allowed, on the most trustworthy authority, to give this, and all recent rumours of the same kind, an emphatic contradiction. His Holiness, in spite of a laborious winter and spring, is in excellent health—equal to an amount of work, intellectual and even physical, which few octogenarians could encounter. The rapid and somewhat unusual rise of the temperature these last few weeks has, however, induced in the Pope a longing for some cooler shade than that afforded by the marble corridors of the Vatican; and so he has decided on a change of residence for the summer months. Not to Castel Gandolfo, the noble scene of many a pontifical *villeggiatura*, on the Alban Lake—still available for his Holiness if he could be got to give up his *rôle* of prisoner in the Vatican,—will Leo XIII. betake himself, but to a spot much nearer home—the Villa Pia, to wit, situated in one of the shadiest recesses of the Gardens of the Apostolic Palace. This delightful 'procul negociis,' built in 1560 by Pirro Ligorio, and until 1870 used by Pius IX. for giving audience to ladies in the summer season, has just been refitted for the Holy Father's reception—not, it is right to add, without opposition on the part of the surgeon-in-chief of the Vatican, Dr. Ceccarelli, and other less authoritative members of the Pontifical Court. Its smallness is objected to, eight being the number of its rooms all told; while its exposure to the malarious exhalations of the contiguous soil is, in Dr. Ceccarelli's view at least, open to still graver criticism. That experienced consultant would fain induce his Holiness to spend his days (if he likes) in the Villa Pia, but to return at least an hour before Ave Maria to the Apostolic Palace, and to sleep in his winter apartment. The Pope, however, is not to be dissuaded from his purpose, and by the 15th inst. will have taken up his residence for the summer in the charming, if long disused, *châlet* of the Vatican Gardens.

THE SANITARY STATE OF ANCOATS.

IN a paper recently read before the Manchester and Salford Sanitary Association Dr. Thresh remarked on the causes of the excessive mortality in No. 1 district of Ancoats. It was pointed out that there was in the district an absence of everything that tends to make a place healthy. The houses were old, dilapidated, and filthy; they were to a large extent built on a cold damp clay, without means for preventing the dampness from rising into the dwellings; and they were very generally so arranged as to enclose within their open spaces much that tends to offensiveness of the atmosphere which the people have to breathe. Details bearing upon these points having been discussed, Mr. Whiley, who holds the post of super-

intendent in the Manchester Health Department, did not attempt to deny the evils described, but stated that other houses in the new parts added to Manchester were quite as bad as those described as regards Ancoats; and he was convinced that it was not a question of more inspectors, for that part of the work was well done. Evidently something far in excess of work that can emanate from Mr. Whiley's department is needed in order to do away with conditions that must obviously be seriously prejudicial to health. It is for the corporation and their responsible advisers to determine how these known evils can best be met, but it seems clear that some extensive measures for the removal of insanitary dwellings are urgently called for.

BOYS AND BOATING.

AN inquest was held at Horselydown last week by Mr. Langham, on the body of a boy who had been drowned by the upsetting of a pleasure boat. The verdict of the jury on this occasion derives considerable interest from a rider by which it was accompanied, and in which the coroner was requested to urge upon the Thames Conservancy Board the necessity of prohibiting the letting of boats on hire to boys unless accompanied by a man duly qualified in aquatic matters. The need of some such regulation is obvious, and it is to be hoped that the Board will give the subject their careful consideration. We do not at all dispute the fact that some young amphibians are capable of acting independently. The embryo fisherman and the fairly seasoned Etonian each in his respective sphere may doubtless in many instances be trusted to take care of themselves on the water, and it would be false discretion to prevent the possessors of such capacity from reasonably exercising it. The case of many boys, however, is quite different, and a boatman in letting his craft to strangers of whose capabilities as "watermen" he knows nothing is under a somewhat serious responsibility. It is on occasions of this kind that the rule above proposed would be useful. The age indicated by the term boyhood would have to be clearly defined if the contemplated reform were carried out. Without attempting to fix this exactly, we may take it that the period of adolescence need hardly be included, and that all ordinary requirements would probably be met by fixing the limit at sixteen years.

DIPHTHERIA IN YORK.

A MARKED TENDENCY to an increase of diphtheria in York during the past two years has induced Mr. S. W. North, the medical officer of health for the city, to prepare a report embodying a good deal of statistical and other information relating to the distribution of the disease in the York registration district. In common with many other parts of the country, York suffered severely from diphtheria during the period 1859–63, no less than 169 deaths having been registered from that cause. Since that date the disease has never in any year ceased to be a cause of death, but in 1885 and 1886 respectively only two fatal attacks were recorded. Since then there has been a distinct extension. Season, whilst clearly having some influence on the incidence of the disease, does not account for it altogether. Thus, out of eighty-two fatal attacks taking place between 1874 and 1889, some deaths were recorded in each of the months of the year, but no less than forty-two took place between November and March. Recent experience in York is to the effect that school attendance has not been a material cause of spread; but, on the other hand, it must be remembered that, aided by a system for the compulsory notification of infectious disease, considerable precautions are exercised to exclude infected scholars from the elementary schools. Details as to forty-six more recent cases show that they were distributed over forty separate houses, and that no two cases occurred in contiguous houses—points which lead Mr. North to conclude that the disease has not evinced any marked evidence of being contagious. There was also no marked preference for any particular soil, the attacks being distributed nearly all over the city. Attention is drawn in the report to the circumstance that diphtheria deaths may have been masked under names such as croup, laryngitis, and other throat diseases, and of 217 deaths from diphtheria and these affections together, it appears that, whilst eighty-two were registered as due to diphtheria, no less than sixty-two were set down to croup. The croup cases would not come within the notification clauses, and there is the further difficulty of separating such deaths into ordinary and non-spasmodic croup. Statistics thus fail to help in some essential respects, but Mr. North's report is of value as drawing attention to the spread of a disease within an urban area which has formerly manifested itself mainly in rural districts, and the causation of which still remains very obscure.

THE DIET OF THE SOLDIER.

THE report of the War Office Committee appointed last October to consider the subject of soldiers' rations, and presided over by Sir Stafford Northcote, has just been presented to Parliament. The conclusions arrived at by the committee seem to accord with the opinion we have expressed on the subject (*vide* THE LANCET, March 9th, 1889), that on home stations the ration, with the authorised messing contribution of 5*d.* a day, affords, under proper regimental arrangements, a sufficient diet. The meat supplied is stated to be generally of good quality, but that of the bread is indifferent. The committee recommend that "medical officers and all young regimental officers should undergo a course of instruction as to the quality of supplies, so that they may be able to decide whether the quality of the rations which they are called upon to inspect is equal to the standard quality authorised for the troops." They also point out the need for improvement in the cooking apparatus, for a more efficient supervision over the supplies, and for increased instruction in cookery. In a memorandum submitted to the committee, the Quartermaster-General states that the Commander-in-Chief has already taken steps for the formation of a class of selected officers who are to go through a course of instruction in the various qualities of meat at the Metropolitan Meat Market, with a view to their appointment as "fully qualified travelling inspectors of rations supplied under contract." Classes have also been formed at Aldershot to instruct officers in the method of judging the quality of supplies; but as it appears that only about eighty officers annually are to be so instructed, this measure seems to be most inadequate to meet the want. It is in contemplation also to introduce a system of rewards to company cooks for the best dressed dinners in each month, if an experiment in that direction now being made at Colchester prove successful. The report incidentally furnishes another example of the remarkable proficiency of our military authorities in the art of "how not to do it." It appears that in 1867 2*d.* a day was added to the soldiers' pay for the purpose of increasing the diet, but, owing to a misunderstanding, the money was not used for that purpose; and again in 1873 a regulation was made that the stoppage for the messing should be increased from 4*d.* to 5*d.* a day, but it was not generally acted upon. It would be interesting to know who was responsible for the misunderstanding, and how it happens that regulations made for the benefit of the soldier are allowed to remain dormant, or to be carried out only when they meet the approval of commanding officers.

THE VENOM OF SNAKES.

THE venom of the rattlesnake has been frequently made the subject of study, and, while its action as a poison has been generally conceded, some writers have endeavoured to prove its efficacy as a drug. Surgeon L. A. Waddell, M.B., has recently been availing himself of his opportunities as a deputy sanitary commissioner in Bengal to determine a point around which it would seem that much uncertainty existed,—the curious question of the effect of serpent venom on the serpents themselves. In a paper he has published he quotes the contradictory conclusions arrived at by previous experimenters, and endeavours to show that, from the accounts of the experiments, it by no means followed that death, when it occurred, was the result of auto-toxic action. Accordingly, he felt that the question was still open, and proceeded to some very interesting investigations, conducted under different conditions of temperature and season, verifying his results by control experiments upon other animals and by post-mortem examination of the snakes he employed. In every case the fresh venom was injected into the cobra with an ordinary hypodermic syringe; the serpents operated upon were all healthy, and had recently been caught; the snakes were kept under observation from nine to fifteen days subsequently, and were then killed. The experiments generally confirm and extend the principle formulated by Fontana in 1765, that the venom is neither a poison to the snake itself nor to those of its own species. This immunity is not to be explained upon the mere fact of the animal being cold-blooded, or upon the anatomical conformation of ophidians, since most, if not all, of the non-venomous snakes are susceptible to venom. Surgeon Waddell suggests that it may result from a toleration established through frequent imbibition of the venom in the modified or attenuated form which it assumes when mixed with salivary and gastric juices and absorbed through the alimentary canal, and in support of this hypothesis he mentions the popular belief that certain snake-charmers, by a process of inoculation with venom, gain protection against the bite of a particular species of venomous snake. If this hypothesis can be verified by further experiments, it will go far towards affording indications for combating the action of the venom on man. The subject is of such importance, and the experiments detailed appear so conclusive, that we look forward with interest to the further prosecution of this inquiry.

A LESSON FOR SANITARY AUTHORITIES.

A PROSECUTION before the Wigan borough magistrates under the 116th section of the Public Health Act of 1875 for being in unlawful possession of the carcase of a certain animal—to wit, a pig—for the purpose of sale or preparation for sale, and intended for the food of man, the pig being unfit to be used as such food, failed owing to a curious circumstance. The case was a very flagrant one. The sanitary inspector had seized the carcase, the medical officer of health had condemned it, and the magistrate had ordered its destruction; there was no attempt on the part of the defence to dispute its being bad, but a technical objection was raised that the minutes of the Sanitary Committee appointing the sanitary inspector had not been signed by the mayor, and that the sanitary inspector was not the nuisance inspector, therefore could not lay the information. The magistrate's clerk would not take upon himself the duty of declaring that "nuisance inspector" was covered by "sanitary inspector," and advised the withdrawing of the summons, so that the medical officer of health might take proceedings. Now it appears that the Wigan Sanitary Committee some time ago, being desirous to carry out more efficiently the Public Health Act, appointed a chief sanitary inspector, but failed to discharge or to revoke the appointment of the previous nuisance inspector, and hence the flaw; but it would certainly be an awkward business if it was upheld in law that a sanitary inspector was not a nuisance inspector. The magistrates, when allowing the summons to be withdrawn, refused to allow costs to the defendant.

FREE AND PAID PUBLIC DISINFECTION IN MARYLEBONE.

MR. WYNTER BLYTH states, in his annual report for 1888 on the health of the parish of Marylebone, that with a view to the prevention of infectious diseases he has recommended that for the future no charge should be made for disinfection. The vestry have, however, come to a most unintelligible resolution on the point. No charge is in future to be made for disinfecting rooms and bedding where the disinfection is ordered by the sanitary authority, but fees are to be maintained where application is made for disinfection to be carried out. In other words, where negligent and ignorant people keep silence about the need for disinfection until such mischief has resulted as to call for the intervention of the sanitary department, the preventive action, too tardily undertaken, is to be carried out at the public cost; but where poor but intelligent parents, who find that some members of their families have an infectious disease, run off to the sanitary department to ask for such disinfecting measures as will tend to save their neighbours and others from risk, they are to be charged for their prompt thought and care of the public health. We can hardly imagine that the vestry had this contingency in view when they passed their recent resolution; and yet the result we foreshadow seems a very obvious one.

AN AUSTRALIAN VIEW OF THE QUESTION OF DISEASE OF THE UTERINE APPENDAGES.

WE have been favoured with the address of Dr. Ferdinand C. Batchelor of Dunedin, President of the Section of Midwifery and Gynæcology in the International Medical Congress. Dr. Batchelor is very severe in his criticisms on the superficial character of much of the work in the gynæcological department up to comparatively recent periods, and laments that in Australia, at least, it fell very much into the hands of unprincipled practitioners, who, on the pretence of some slight operation or placing some doubtful instrument, extracted large sums from patients whose fears had been excited. It is significant of the new set of ideas that is dominant in this department that the name and work of Simpson scarcely appear in the address. Dr. Batchelor remarks that during the last three or four years gynæcologists have ceased to write and speak so much of uterine displacements, cervical lacerations and their repair, menorrhagia, dysmenorrhœa, and hæmatic and inflammatory effusions, which up to that time were their favourite topics. Now the bulk of gynæcological literature is made up of reports of cases of salpingitis, pyo-salpinx, hydro-salpinx, oöphoritis, and perioöphoritis. He believes that this innovation is more full of light than any other that could be named, and of promise of good results. He thinks that the needless removal of an ovary is as great an offence as the needless removal of a limb for hysterical knee-joint; that a large proportion of such cases may be relieved by suitable medical treatment—as rest, perchloride of mercury, or iodide of potassium and bromides; but that in a certain residuum of cases surgery must come in, and will give great results. Dr. Batchelor narrates cases in illustration of his views. He has operated in about fifteen cases, and his colleague, Dr. Maunsell, in fifteen others. In all these cases he found no inflammatory changes *in the broad liga-*

ment, but invariably pelvic peritoneal adhesions, thickened and dilated Fallopian tubes, and adherent ovaries. The clinical features of such cases are, thickening in the lateral vaginal fornices, constant pelvic pain, and occasional recurrent attacks of an inflammatory nature. He quotes Winckel's recent work, to the effect that, of 575 observations of the Fallopian tubes, the tubes show a remarkably large number of affections and anomalies in early life, and that they are predisposed to a great variety of affections at all ages, almost *one-third* of all female cadavers showing disease in these organs! Dr. Batchelor attributes the first gleam of true insight in this region to Bernutz and Goupil, whose essay was translated by the late Dr. Meadows thirty years ago, and the greatest practical advances to Mr. Lawson Tait. He considers that one of the greatest improvements in practical midwifery is the greater use of the hands in the bimanual method of examination. We are disposed to think that but scant justice is done to some of our general pathologists in these new-fangled revelations.

A CRITICISM OF PASTEUR'S METHOD.

DR. JOSEPH DRZEWIECKI, physician to the University Clinic at Warsaw, has sent us a paper in which it is contended that the method of anti-rabic inoculation for the prevention of hydrophobia is unscientific. He claims that M. Pasteur has never given a satisfactory answer to the objections urged by Frisch, Ullman, and Peter; and he revives the arguments used by M. Luteaud in the *Journal de Médecine*, which were based on the statistics adduced by Pasteur. He points out that, although the English Commission investigated 90 cases, in only 24 of these were the bites inflicted by undoubtedly rabid dogs, so that the number of 8 fatal cases was far in excess of the usual proportion of 5 per cent. Further, that, although according to the report of that Commission the total mortality among the 2682 cases treated by M. Pasteur would ordinarily have been 130 instead of the 40 actually recorded, it should have been stated that only 233 cases were bitten by rabid animals, and that therefore the estimated mortality ought to have been only 15. Both M. Luteaud and M. Peter argued that the Pasteurian method had increased the rate of mortality. The statistics of Dr. Kischensky are then quoted. They were obtained from the archives of the Katharine Hospital at Moscow. From them it appears that, of 307 persons bitten by unquestionably rabid dogs, 18 were bitten in the head (4 deaths), 90 were bitten on the hands (2 deaths), 25 on the feet (no death), and of 170 bitten through the clothes only 1 died. To these may be added 1 fatal case among 4 in whom the site of the bite is not recorded. This gives a total mortality of 2·6 per cent. The mortality among those bitten by rabid wolves (24 cases) was 30 per cent.; according to M. Pasteur it should be 82 per cent. In all the fatal cases the bites were very extensive, and on the head. Of 17 cases bitten by rabid horses, 9 were admitted within three months, but none developed hydrophobia, 1 died from erysipelas, and 1 from septicæmia. Of 4 bitten by a rabid hog, none fell ill; there were 4 cases bitten by rabid men, 1 by a white bear, and 1 by a rabid squirrel. Thus, of the total number (396) bitten by rabid animals, 18 died, or 4·52 per cent. Dr. Drzewiecki maintains that Pasteurian inoculation does not prevent hydrophobia in man, and that M. Pasteur only proved that it prevents rabies in the dog, which, however, was not even borne out by the experiments of Frisch. The particulars of some of the fatal cases treated during last year at the Pasteur Institute are cited to support the contention of the inefficacy of the method; and the plea that severe cases of bites on the face or head cannot be successfully treated is held to show that the method is not truly anti-rabic. Again, if the inoculations modify the intensity of the virus, how is it that the symptoms exhibited by the fatal cases are so severe? The method, Dr. Drzewiecki thinks, may be of value to the veterinary surgeon, but applied to man "it is unscientific, and as such must be condemned in the interest of humanity and science."

THE KOLA NUT.

THE value of the kola nut (seeds of Sterculia acuminata) as a dietetic and therapeutic agent has been recently tested by Surgeon R. H. Firth. These nuts are allied in composition to cocoa, coffee, and tea, but contain a relatively large amount of caffeine. The properties ordinarily assigned to kola are those of a strong tonic and stimulant to the nervous system, counteracting and removing the sense of exhaustion after fasting and fatigue; it has also been credited with having an antagonistic action to alcohol, and it has been said to purify water. From his observations Surgeon Firth concludes that kola is in no sense a food; that it increases the total urinary water, with a slight reduction of its total solids and a marked reduction of the extractive; that it has a peculiar stimulant action on the nervous system, temporarily strengthens the heart beat, and increases the arterial tension. In times of exertion and fasting it wards off the sense of mental and physical depression and exhaustion. As a therapeutic agent in convalescence, and as an antagonist to alcoholic sequelæ, kola has not yielded any positive results in Surgeon Firth's hands. For the purification of water it does not appear to be superior to other mucilaginous seeds, its action being purely mechanical. In this report due prominence is given to the importance of separating seeds which contain no caffeine, such as Garcina kola and Sterculia cordifolia, as these would speedily discredit the employment of kola by the troops under conditions when it might possibly be of service. It appears that an infusion, from its astringent action, might be used for those suffering from diarrhœa.

SHABBY REMUNERATION OF MEDICAL OFFICERS OF PROVIDENT DISPENSARIES.

THE advocates of provident dispensaries, whose rules require no limitation of wage or income as a condition of membership, evidently wince under the charge of shabbiness against persons in the position of well-to-do tradesmen and others of independent means who avail themselves of such institutions. Writing in the *Birmingham Daily Post*, Mr. Thomas H. Ganderton tries to justify such persons. After praising a dispensary at Stourport that does not recognise charitable or outside assistance (by the way, we should like to be quite assured on this point), he says: "Where the society is entirely independent of charitable assistance, any person, irrespective of position, should be free to join, and could certainly do so without loss of self-respect, as they make a fair and sufficient contribution for the benefits assured. In the Stourport society the proportion of well-to-do tradespeople and persons of independent means preponderates. Adopt Mr. Stanton's suggestion to limit the membership to those earning less than 30*s.* or 40*s.* per week, and the institution would collapse." We should like to know what Mr. Ganderton considers "a fair and sufficient" contribution from such people. He is well answered by "Ne Plus Ultra" in our contemporary, who says that the subscription paid is 4*s.* a year. We must decline emphatically to remove the stigma of shabbiness from any man who proposes to pay an educated medical man 4*s.* a year on any other ground than that his own wages do not exceed 30*s.* or 40*s.* a week. Nor can we

allow that a medical man who accepts such terms from well-to-do people is acting respectfully to his own profession. It is monstrous to reward medical service so; and we venture to say that if Mr. Ganderton had considered the education of medical men, their expenses, and their services by night and day, he would not have said or implied that such sums constituted "a fair and sufficient contribution." Medical men may be slow to combine and organise against such meanness, but such combination will be forced upon them. Meantime, their benevolence will not fail to those who "cannot recompense them."

THE REGISTRATION OF TRAINED NURSES.

THIS subject has now advanced into the region of "practical politics," and its enforcement by State authority is probably within a measurable distance. Medical men keenly feel its importance and urge its adoption, for by daily experience they know that there is no legal check against ignorant impostors palming themselves off as nurses, or any means of controlling certificated women who prove themselves unworthy of trust. The public also is rapidly awakening to the great dangers to which the sick are thus exposed. Consequently we have been much surprised to receive a pamphlet signed Eva C. E. Lückes, matron of the London Hospital, inveighing against any form of registration being initiated for nurses. We should not have deemed this pamphlet worthy of notice except that it is apparently issued semi-officially. We hesitate to believe that a public institution dependent upon public support can be so unwise as to place itself in open antagonism to a great popular want and a widespread professional demand. We therefore should be glad to know whether this pamphlet has been issued by authority or not. If not, as we earnestly hope, it should be made plain to the public that this is the case, and thus free the London Hospital from the false and altogether untenable position in which it has been placed.

CARDIAC SYPHILIS.

ACCORDING to Petersen, the proportion of cases of visceral syphilis in which lesions of the heart are to be found is as much as 5·5 per cent., being slightly more than those of the brain. The calculation is based on the results of 183 post-mortem exmaninations in such cases, and is quoted at the close of an interesting monograph ("Die Syphilis des Herzens," Wien, 1889) recently published by Dr. T. Lang of Vienna. Dr. Lang has collected from literature the scattered records of syphilitic heart disease, and shows how each part of the organ may be the seat of lesions attributable to syphilis. Endocarditis is, he says, very rare, except in association with myocarditis. It may be parietal or valvular. The former is the more common, and is met with (at least in extra-uterine life) as dense fibrous thickening upon the wall of the left ventricle, near the apex, or at the base near the root of the aorta. This form is fairly distinctive; but *valvular* endocarditis of syphilitic origin is only to be distinguished by the absence of any other etiological factor; large vegetations characterise it. Besides these forms, gummata may occur on the endocardium, generally in association with peri- or myocarditis. Prominent among the symptoms is cardiac asthma, which was very marked in a case observed by the author, where also there was aphasia from cerebral embolism. Syphilitic myocarditis is less equivocal and perhaps more frequently, productive of excessive interstitial growth of fibroid tissue, involving the outer wall of the ventricles mainly, less commonly the papillary muscles. It may be associated with gummata. Clinically, the disease is marked by irregularity in the rhythm and frequency of the pulse, by dyspnœa, without any evidence of enlargement of the heart or of valve disease. There may be angina, suggestive of a syphilitic affection of the cardiac nerves. Many cases terminate suddenly without any previous symptoms, but where the course is more prolonged the symptoms may be those of cardiac failure and dilatation. The diagnosis is only to be approximately made in cases with a marked syphilitic history, without evidence of alcoholism or of fatty degeneration. Prognosis is most unfavourable, but cases of "healed lesions" have been reported. Treatment consists in the administration of the iodides, and also of cardiac tonics, as caffein and strophanthus, especially if there be much dyspnœa. Syphilitic pericarditis is mostly secondary to the disease of the myocardium, and is generally partial, and limited in distribution. Lastly, a rare case of congenital "syphilitic myoma" is given as an example of new growth in the heart wall attributable to syphilis. Dr. Lang's table of forty-four cases, which includes congenital as well as acquired disease, shows the preponderant number of instances between the ages of twenty-eight and thirty-seven years. He has collected some cases from the Pathological Society's Transactions (Cayley, Gould, Pasteur), as well as from the writings of Wilks and Hutchinson.

THE CONVERSAZIONE AT THE ROYAL COLLEGE OF SURGEONS.

THE first conversazione held by the President, Vice-Presidents and Council of the College was given in the museum, library, and other parts of the College buildings on the evening of Wednesday, the 12th inst. Hitherto this conversazione has been given by the President of the College in a private capacity, the Council permitting the use of the College for that purpose. The numerous guests were received by the President and Council in the inner hall; a band of the Royal Artillery played in the western museum alternately with another, also of the Royal Artillery, in the eastern museum. Mr. Eadweard Muybridge gave exhibitions in the library of his method of investigating the movements of animals, and reproduced representations of the result showing the animals in apparent motion. There was also a display of microscopes in the council room. The entertainment was a great success, and the arrangements for the comfort of the visitors were excellent.

THE INFECTIVITY OF A CORPSE.

THE question as to how far a corpse can be considered infectious is one concerning which very considerable difference of opinion exists. We have ourselves recently been the medium of the expression of the two sides of the matter—much, we fear, to the unsettling of the views of those who ventured to ask for a definite answer to a question that, in our present state of knowledge, really admits of no such definite response. In a northern town much controversy has recently arisen respecting the prohibition to admit into the cemetery chapel any corpse of a child dying of whooping-cough, lest the disease be transmitted therefrom to those entering the chapel. As regards this particular disease, the question of post-mortem infectivity might, perhaps, be decided by the bare fact that, as it is probable that the expired breath is the carrier of the "germ" or "virus," the risk of such contagion is reduced to a minimum when the act of respiration has ceased; and that only by assuming the retention of the infective agent in clothing &c. could the corpse strictly be said to be infectious. Yet it is only a matter of opinion, and we are not aware of any facts to warrant the assertion that whooping-cough has never been so transmitted. We should, however, consider it as the *ne plus ultra* of sanitary caution to enforce such a prohibition as that named. Perhaps some of our readers could adduce instances of post-mortem infection in the case of whooping-

cough or allied diseases. If so, we shall be glad to receive them, and they may then afford some basis for a line of action which must be thought to be somewhat arbitrary with present knowledge. It is otherwise with diseases where the virus is more likely to be given off from the surface of the body—as scarlet fever, measles, or small-pox; but even in these cases records are very few of infection being transmitted by a corpse.

PROPOSED MEMORIAL TO FATHER DAMIEN.

IT is gratifying that the self-sacrificing labours of the late Father Damien should have received such recognition as is evinced in the announcement of the movement headed by H.R.H. the Prince of Wales, and shared in by a large number of prominent men of all creeds and political parties. Commenced under such auspices, there is every reason to hope that the movement will succeed. It embraces not only the erection of a monument at Molokai, the scene of Father Damien's life work, but also two other schemes, which, if carried out, may go far to wipe out the reproach that may well be cast at England for her neglect in investigating thoroughly the nature and treatment of a disease that is so rife in some parts of her colonial dominions. It is proposed to found a leper ward at the Hospital for Diseases of the Skin, Blackfriars, to be called the Father Damien Ward, and in connexion therewith to found travelling scholarships to promote the study of leprosy. The other suggestion is to follow up the recent recommendation of the Royal College of Physicians, and to despatch a Commission to India to determine in what manner the disease may be best alleviated and, if possible, eradicated. This, which we have more than once urged as the duty of the State, would necessarily require large funds, but no more fitting memorial of Father Damien's work could be well suggested. It must also be gratifying to Archdeacon Wright, who has done not a little in urging the reconsideration of the subject, especially in view of the question of contagiousness.

GRANULOMA FUNGOIDES.

A CASE of the rare affection variously termed granuloma fungoides or mycosis fungoides is fully described by W. Donitz and O. Lassar of Berlin (*Virch. Arch.*, cxvi., 2). It is of value for the failure to confirm the opinion that the affection depends upon a micro-organism, as averred by Rindfleisch, Hochsinger, and Schiff. The examination was made upon the cutaneous nodules (removed during life) by means of cultivation and inoculation experiments. The results were wholly negative. The authors also had the opportunity of seeing some of Rindfleisch's preparations, and suggest that the cocci found therein were due to post-mortem infection. Granuloma fungoides, they say, resembles a sarcoma, but differs in its more chronic course and slight tendency to secondary growths, in the spontaneous retrogression of whole tumours, and its tendency to temporarily heal.

THE METROPOLITAN HOSPITAL DISPENSARY.

OUR contemporary *The Echo* lauds the Provident Scheme of the Metropolitan Hospital, Kingsland-road, or rather the industrial poor who help themselves and at the same time help the hospital by a small monthly charge as clients of the hospital. It is very doubtful how far those who use a hospital providently can perform the difficult task of serving two masters. They cannot help themselves and keep the hospitals. The object of small provident payments by the poor is to get a *quid pro quo*, and their provident payments are small enough to pay the medical man who attends them! Such a system at a hospital is out of place. There are scores of medical men in the neighbourhood of this hospital ready to accommodate the poor on proper terms. Hospitals have other functions, and should leave the working classes and the medical profession to adjust their own terms. It is impossible for the authorities of hospitals to prevent the improper use of such arrangements by persons able to pay the ordinary charges, and thus they estrange the sympathy of the medical profession and of those who regard the hospitals as a charitable provision for severe cases.

BERI-BERI.

IN a paper upon Beri-beri, Surgeon W. F. Thomas (*Indian Medical Gazette*, April, 1889) states that the affection is known to be endemic in Ceylon, in certain parts of India, in Burmah, the Malayan Peninsula, Siam, Japan, Islands of the Indian Archipelago, West Coast of Africa, and in South America. Among 177 cases, no less than 128 were under thirty-five years of age, and 152 were males. Debility following ague, renal disease, and scorbutic cachexia favour its occurrence. It is influenced by changes of temperature, and in jungle districts it prevails after the rains. It is most common among natives, but Europeans suffer when dwelling in endemic districts. It is not contagious. The proximate cause in a very large number of his cases was due to the presence of anchylostomum duodenale; and Mr. Thomas remarks that the only appropriate treatment consists in "the expulsion of the parasites from the intestines by small doses of calomel frequently till free purging has set in, or by the administration of thymol, proper dietetic rules, and removal from the beri-beri area. Until the parasites are expelled other treatment is of no avail." The paper deals fully with the symptoms and pathology of the affection, and a comparison is made between the acute, subacute, and chronic forms.

HOVE AND SANITARY ADMINISTRATION.

INTENDING VISITORS to Hove will feel some interest in knowing the importance which the sanitary authority attach to public health services. Hove is actually losing its medical officer of health because he is unwilling to continue to perform the duties of that office for the paltry salary of £100 a year. Dr. Kebbell has been fifteen years in the service of the Hove commissioners, and during this time the population has more than doubled, but his salary has remained unaltered, and the commissioners prefer to accept his resignation rather than tax the rates to the trifling extent of another £50 or £100. The public will draw their own conclusions from this fact. They will not unnaturally think that the commissioners do not place any very high value upon the health of the residents and visitors to the town. Seeing that Hove is largely dependent for its prosperity upon its health reputation, a more foolish piece of parsimony it is not easy to imagine.

THE FEVER AT NEW HERRINGTON.

THE cause of the epidemic at New Herrington, which is under investigation by Dr. Page, of the Local Government Board, still remains obscure. The suspicion which the water-supply underwent is to some extent combated by the results of chemical analysis; but the cause of enteric fever is as yet undiscoverable by chemical processes. It is stated that owing to the discovery of a fissure in the limestone, which might have admitted of the passage of sewage from a farm into the water, large volumes of salt have been let into the crevice, and it now turns out that the salt has been detected in the water. Pending some action as to a water-supply, a notice urges people not to use the existing supply for domestic purposes, except after recent and thorough boiling.

THE HOSPITAL SUNDAY FUND.

WE present our readers to-day, in the form of a Special Supplement, with a review of the work being done in the hospitals of London. Of the claims which these institutions have upon public sympathy and support it is impossible to speak in language half so effective as the bare unvarnished facts. To ascertain these facts has been, indeed, a matter of no little difficulty, for the available statistics are exceedingly meagre. We have, however, been assisted in the collection of materials by the secretaries and other officers of the various institutions in the most effective manner. If we do not thank them for the service which they have thus rendered, that is only because we too strongly feel that their interest in the result will not be less than ours. In appreciation of the help which they have afforded, and the manner in which it has been rendered, we shall not be found lacking. The results at which their coöperation has enabled us to arrive will be found, we think, to have no circumscribed interest. They represent the work done by the hospitals, and the machinery employed in doing it, with a fulness that probably has never before been attained; and they serve to demonstrate, what all to whom this work is familiar will be fully prepared to accept, that whatever blemishes may be found in the organisation or in the work of particular institutions, when viewed as a whole it is admirable beyond praise, and the more fully it is understood the more wonderful and the more admirable does it appear.

THROAT DISEASE IN MAN AND THE LOWER ANIMALS.

ANOTHER suggestion as to the existence of a connexion between diphtheria and allied throat disease in the human subject and some similar disease in a lower animal comes from Darton, near Barnsley, where Dr. Bruce Low, of the Local Government Board, is making inquiry as to the deaths of twenty children from diphtheria and so-called "croup." The clerk to the Local Board of Health has reported that in a number of cases there seem grounds for believing that the disease had been communicated to children by means of cats which were ailing, one of them fatally so. Whatever the actual facts in this case may turn out to be, it is quite certain that we already know enough to call for much greater caution than has heretofore been observed in our dealings with animals such as cats, and also with certain birds, when these appear to be suffering from throat affections.

POOR-LAW MEDICAL MEN AND STIMULANTS.

OUR view that alcohol should only be prescribed by medical men under a great sense of responsibility is now well known. But we entirely disapprove of guardians dictating to their medical officers in what cases they shall prescribe it. They might as well go further and say in what cases opium shall be allowed. We are glad to see that in the Board of Guardians of Madeley the moderate section prevailed, and passed the following amendment on a resolution restricting the employment of alcohol to "exceptional and extreme cases": "That this board thank the medical officers for their opinions as to the use of spirits as medical extras, and are pleased to learn that they only prescribe such use in urgent and extreme cases, and no doubt they will continue to do the same." Mr. Machin seconded the amendment, which was carried by a majority of one.

THE Queen has been pleased to appoint Richard Quain, M.D., LL.D., F.R.S., Fellow of the Royal College of Physicians, to be one of Her Majesty's Physicians Extraordinary.

THE report on the composition and quality of the Metropolitan water-supply during the month of April by Messrs. William Crookes, William Odling, and C. Meymott Tidy, shows, that of the 168 samples examined, the whole were found to be clear, bright, and well filtered. The quality of the water-supply has continued throughout the month to be entirely satisfactory. Any slight variation that has been recognised is in the direction of an increased degree of freedom from organic matter. Dr. Frankland, in his analysis, states that, taking the average amount of organic impurity contained in a given volume of the Kent Company's water during the nine years ending December, 1876, as unity, the proportional amount contained in an equal volume of water supplied by each of the metropolitan water companies and by the Tottenham Local Board of Health was: Kent 0·4, Tottenham 1·2, New River 1·4, Colne Valley 1·5, Grand Junction 1·8, Lambeth 2·3, Southwark 2·6, East London 3·0, and Chelsea and West Middlesex 3·3.

THE annual dinner of the Army Medical Department was held at the Holborn Restaurant last Tuesday evening, Director-General W. H. Mackinnon presiding, and about a hundred gentlemen being present. We hope to give a full report of the proceedings in our next issue.

THE University of Durham have appointed Dr. Philipson, the Professor of Medicine, and Mr. Henry E. Armstrong, the Lecturer on Public Health, to represent them on the general committee being formed to organise the International Congress of Hygiene.

ALBERT CARLESS, M.B., M.S.Lond., F.R.C.S., has been appointed Assistant Surgeon to King's College Hospital, vice W. J. Penny, F.R.C.S., resigned.

WE understand that the first meeting of the Royal Commission on Vaccination is to be held on the 26th inst.

PROPOSAL FOR A VOLUNTARY EXAMINATION IN SHORTHAND.

IN order to encourage the use of shorthand in the study and practice of medicine, and especially its acquisition before special studies are commenced, it is proposed to offer a prize or prizes to the most proficient among those students who, having passed the preliminary examination and are beginning professional study at a recognised medical school, choose to present themselves. For this purpose an examination will be held in the third week of October, at a place and time to be previously announced in the medical journals. The examination will only be held if at least five gentlemen intimate their intention to present themselves, by writing to Dr. Coupland, 16, Queen Anne-street, not later than Oct. 7th. The number and value of the prizes (which will consist of books or instruments) will depend on the number of candidates.

Since there is reason to believe that many students already engaged in professional study write and use shorthand, it is proposed, in order to encourage its *proper* use, to offer a special prize to those who have been at least one year at a recognised medical school, if at least five names are sent to Dr. Coupland. In this, the practical employment of shorthand in medical work will be tested.

It is recommended that the system acquired should be Pitman's "Phonography," but if a student has learned another system, he shall, if possible, be examined in it.

It is proposed that the details of the examinations, prizes, &c., should be in the hands of a committee consisting of Sir Dyce Duckworth, Mr. Howard Marsh, Dr. Gowers, and Dr. Coupland, but particulars as to the minimum re-

quirements (in which accuracy will be considered of greater importance than speed) may be obtained after July 15th, on application, or by post if a stamped and directed envelope be sent to Lewis's Medical Library, 136, Gower-street, London, W.C.

It has not been possible to submit the proposal to many of those whose opinion would be esteemed. The Hon. Secretary will be glad to receive the names of any other members of the profession who approve it, and also of those who already use Shorthand in their professional work.

The following members of the medical profession have already signified their approval of this proposal:—Sir William Jenner, Bart., G.C.B., F.R.S.; Sir Henry Acland, F.R.S.; Sir Dyce Duckworth; Sir W. Roberts, F.R.S.; Sir Spencer Wells; Sir Edward Sieveking; Professor Michael Foster, Sec. R.S.;[1] Professor Greenfield; Dr. S. Wilks, F.R.S.; Dr. Quain, F.R.S.; Dr. Hughlings Jackson, F.R.S.; Dr. George Johnson, F.R.S.; Dr. W. H. Dickinson; Dr. Beddoe, F.R.S.; Dr. Lionel Beale, F.R.S.; Dr. Broadbent; Dr. Lauder Brunton, F.R.S.; Dr. T. H. Green; Dr. Pye Smith, F.R.S.; Dr. G. V. Poore; Mr. T. Holmes; Mr. Brudenell Carter; Mr. H. G. Howse, M.S.; Mr. Marcus Beck, M.S.; Dr. F. T. Roberts; Dr. Mitchell Bruce; Dr. Barlow; Dr. Long Fox (Clifton); Dr. Ferrier, F.R.S.; Mr. Howard Marsh; Dr. F. Taylor; Mr. Wakley; Mr. T. Wakley, jun.; Dr. Theodore Acland; Dr. E. B. Gray (Oxford);[2] Dr. Uhthoff (Brighton); Dr. Donald Hood; Mr. Pugin Thornton (Canterbury);[3] Mr. E. Venning; Dr. Gowers, F.R.S. (Hon. Treasurer); and Dr. Sidney Coupland (Hon. Secretary).

In reference to the above proposal, the following Memorandum has been submitted to us for publication:—

SHORTHAND IN MEDICAL STUDY AND WORK.

Shorthand is capable of rendering great service to members of the medical profession—practitioners, physicians, and students,—and through them to the public. Its extensive use would render it possible for the practitioner to keep records of facts which come under his notice, now for the most part lost—facts important or instructive to himself or others. Many facts can be collected by no other means, and all would serve to change his vague "experience" into definite knowledge, most valuable to him if so recorded as to be readily referred to. The benefit to patients scarcely admits of doubt. Even short notes in longhand are seldom possible to a busy man. Those who would learn shorthand are for the most part the men who would use it.

The Physician is aided in a special manner by the fulness of the notes of cases that can be taken. To him, in his effort to advance our knowledge of medicine, and to all who cultivate the sciences that rest on observation, shorthand is of peculiar value by increasing, at least threefold, the amount of recorded observation, recorded while the phenomena are in progress. The value of this increase, in fact, is scarcely to be measured. Shorthand must lessen the influence of imagination in science, by increasing the amount and influence of definite fact. In the observation of disease especially, in which so much has frequently to be recorded in a short time, the effect of its general use would soon be perceptible in the greater exactness and minuteness of our knowledge. Its influence extends, in the same manner, to the processes of comparison and collation of facts, and indeed to almost all the processes of work, up to actual composition for the press. Even in this it can be used; one system—"phonography"—can be transcribed or type-written with perfect accuracy by a clerk.[4] Lastly, the ease and sureness with which letters written in shorthand can be transcribed extends the aid it gives to the limits of a physician's active life. To the *student* its value is felt in almost every part of his work. *But he should never attempt a full report or write out in longhand notes for his own use.* Clinical notes may be copied in shorthand into some special book. Transcription is a useless waste of time. The proper use of shorthand is to secure a perfect abstract of the lecture, arranged in paragraphs, with longhand headings to catch the eye. In doing this he cannot help giving more attention to the subject of the lecture than if he took no notes, and carrying away in his memory more than he would under other circumstances, as well as an epitome of far greater value than is otherwise possible. This, and the other statements here made, are founded on actual experience. But for this it is almost essential that shorthand should be acquired before the commencement of medical study. By the young it is learned far more easily than by adults. It constitutes in itself a definite process of education, of both hand and brain, of a very peculiar kind. The last year of school is the time for its acquisition. According to the time given, four, six, or nine months will then supply an adequate knowledge and skill; its employment through life will be almost certain. But shorthand will never be taught in schools in a real manner till it is felt to have a definite value in the professions.

The advantage of uniformity, in the system of shorthand adopted, reaches the point of actual necessity. If the use of shorthand extends widely in the profession, the transcription of many letters will be entirely needless, and the time (as stated) will be reduced to less than a third, the labour to a tenth, or less. The system of shorthand called Phonography, or Pitman's Phonetic Shorthand, has such advantages as to render the desirability of the use of this system in the medical profession, and, indeed, in any profession, a matter altogether beyond discussion. Although a few professional reporters prefer other systems for the swiftest writing, yet the writers of other systems are only one-twentieth of the professionals. Outside their ranks, for one writer of any other system there are at least one hundred writers of Pitman's. It is the only system that is nominally taught in schools, and, written at the rate of 100 words per minute, is much more certainly legible than longhand at 35 or 40; indeed, if written with moderate care, such shorthand can be read at sight by another person about as fast as the lips can move. It is the only system known to be used by medical men at the present time.

An examination in shorthand should include ability to write with accuracy, to read with facility, and, in the case of those already engaged in professional study, evidence of knowing how to use it, as mentioned above. There would be no difficulty in the conduct of an examination or in securing a medical examiner if desirable. *That shorthand is capable of facilitating all work in which the pen is used is certain. It is also certain that (apart from reporting) its utility would be greatest where it is now least used, in the work which is directly for the good of others, and that its indirect value to the world would reach its height in the hands of members of the medical profession.*

[1] Professor Michael Foster writes: "I am of opinion that a knowledge of shorthand would be very valuable to a medical man, and I think the professional corporations would act wisely in giving encouragement to the study of it. I dislike compulsory examinations, and should be very loth to add to them; but something might be done by rewarding an optional examination. The necessity for a uniform system is obvious, and from what is said Pitman's is clearly the one to be adopted."

[2] Dr. Gray has used shorthand for thirty years, and desires to say he endorses every word of the memorandum.

[3] Mr. Pugin Thornton has been good enough to ascertain the opinions of eight members of the profession at Canterbury with regard to the proposal, and of these seven approved it. Dr. Lochee, consulting physician to the hospital, has used shorthand for sixty years.

[4] Indeed, a specially trained compositor can put up ordinary type from shorthand as readily as from longhand.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Brighton Urban District.—In drawing attention to the fact that the death-rate for Brighton, which last year reached 16·07 per 1000, is the lowest rate on record, Dr. Newsholme admits that a reduction of death-rate in the country generally was by no means uncommon during 1888, where the summer was cold and diarrhœa deaths were but few in number. But in Brighton the diminution is not a spasmodic one, it is the continuance of a process which, with certain oscillations, has now been going on for a series of years, and Brighton this last year heads the list of the twenty-eight large towns and cities. The infantile death-rate amounts to 149 deaths under one year to every 1000 births, and this is a rate which, though not excessive when compared with that of our densely-peopled centres, is one that should undergo further diminution in Brighton. Grouping together the several diseases which, though so

dissimilar in point of causation, are usually placed under the heading of principal zymotic diseases, Brighton has a smaller rate of mortality than it has experienced for at least eight years. Amongst these deaths were 15 from enteric fever, 64 from diarrhœa, and 24 from diphtheria. No proper judgment can be formed as to the total attacks, for the system of voluntary notification of infectious diseases is admittedly imperfect; there is also no table in the report to show how far "croup" deaths may have complicated the returns as to diphtheria. Improvement in the water services of houses is steadily in progress, and much current sanitary work is going on. But Brighton is not fortunate in having 53 slaughter-houses and 29 cow-stalls within its precincts; and some more expeditious and efficient method of dealing with house and trade refuse is needed. The sanatorium received 173 cases during the year, and a large amount of work was done with the Washington Lyon steam disinfector.

Lytham Urban District.—Excluding deaths amongst visitors, Lytham had in 1888 a general death-rate of 14·9 per 1000, and the zymotic rate was only 0·2. The report deals mainly with vital statistics, but Mr. Alex. Eason refers to the isolation in a temporary hospital of one case of small-pox, to the failure in securing proper disinfection owing to the absence of adequate means for conveying the articles to the stove, and to the fact that both the sewerage and water-supply of the district are satisfactory.

Wavertree Urban District.—As in many other districts, so in Wavertree, the annual mortality was exceptionally low during 1888. Dr. H. Harvey gives it as 14·05 per 1000 living. Details are recorded as to the occurrences of infectious diseases in the district, a large proportion of the cases as well as of the deaths being evidently heard of; but there seems no proper provision for the isolation of such diseases, the work of preventing their spread being apparently limited, in the main, to certain disinfection processes. In one case, also, certain bedding was destroyed and replaced at the cost of the sanitary authority. A good deal of paving of streets and back passages has been carried out during the year, and the scavenging, which is effected by men in the employ of the authority, has been performed with such efficiency that no single complaint has been received.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5849 births and 3244 deaths were registered during the week ending June 8th. The annual rate of mortality in these towns, which had been so low as 17·4 and 16·5 per 1000 in the preceding two weeks, rose last week to 17·7. During the first ten weeks of the current quarter the death-rate in these towns averaged 18·6 per 1000, and was 2·4 below the mean rate in the corresponding periods of the ten years 1879-88. The lowest rates in these towns last week were 10·1 in Leicester, 13·0 in Bristol, 13·4 in Birmingham, and 13·8 in Norwich. The rates in the other towns ranged upwards to 26·0 in Plymouth, 27·0 in Halifax, 30·2 in Manchester, and 36·1 in Preston. The deaths referred to the principal zymotic diseases in these towns, which had been 426 and 391 in the previous two weeks, rose again last week to 430; they included 152 from measles, 98 from whooping-cough, 67 from diarrhœa, 49 from diphtheria, 41 from scarlet fever, 23 from "fever" (principally enteric), and not one from small-pox. The deaths from these zymotic diseases caused the lowest death-rates last week in Norwich and Cardiff, and the highest death-rates in Bolton, Hull, and Preston. The greatest mortality from measles occurred in Oldham, Leeds, Newcastle-upon-Tyne, Bolton, Manchester, Halifax, Hull, and Preston; from whooping-cough in Portsmouth, Birkenhead, and Preston; and from scarlet fever in Derby, Salford, and Plymouth. The death-rate from "fever" showed no noticeable excess in any of these towns. The 49 deaths from diphtheria in these towns included 34 in London, 3 in Manchester, 3 in Salford, 3 in Sheffield, and 2 in Birmingham. Small-pox caused no death in any of the twenty-eight great towns; and no small-pox patient was under treatment at the end of the week either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet-fever patients in the Metropolitan Asylum and London Fever Hospitals at the end of last week was 570, against 610, 603, and 587 on the preceding three Saturdays; 39 cases were admitted to these hospitals during the week, against 65, 57, and 49 in the previous three weeks. The deaths referred to diseases of the respiratory organs in London, which had been 217, 177, and 162 in the preceding three weeks, rose again last week to 205, but were 47 below the corrected average. The causes of 79, or 2·4 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Nottingham, Portsmouth, and Brighton. The largest proportions of uncertified deaths were registered in Blackburn, Oldham, Salford, and Preston.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 22·3 and 21·3 per 1000 in the preceding two weeks, further declined to 19·4 in the week ending June 8th; this rate exceeded, however, by 1·7 the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged last week from 13·3 and 15·0 in Greenock and Edinburgh, to 21·0 in Aberdeen and 23·4 in Glasgow. The 497 deaths in the eight towns showed a further decline of 48 from the numbers in the previous two weeks, and included 29 which were referred to whooping-cough, 23 to measles, 16 to diarrhœa, 5 to scarlet fever, 2 to diphtheria, 1 to "fever" and not one to small-pox; in all, 76 deaths resulted from these principal zymotic diseases, against 117 and 85 in the previous two weeks. These 76 deaths were equal to an annual rate of 3·0 per 1000, which was 0·9 above the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 37, 53, and 33 in the preceding three weeks, further declined last week to 29, of which 16 occurred in Glasgow, 6 in Dundee, 3 in Leith, and 2 in Edinburgh. The 23 deaths from measles showed an increase of 3 upon the number in the previous week, and included 16 in Glasgow and 7 in Aberdeen. The deaths attributed to diarrhœa, which had been 10 and 15 in the previous two weeks, further rose last week to 16; 6 were returned in Glasgow, 3 in Edinburgh, 3 in Dundee, and 3 in Aberdeen. Three of the 5 deaths from scarlet fever occurred in Glasgow, and the deaths referred to diphtheria and "fever" were considerably below the average numbers. The deaths from the principal diseases of the respiratory organs, which had been 107 and 89 in the preceding two weeks, rose again last week to 93, but were 10 below the number in the corresponding week of last year. The causes of 48, or nearly 10 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had declined in the preceding four weeks, from 27·3 to 19·7, rose again to 21·3 in the week ending June 8th. During the first ten weeks of the current quarter the death-rate in the city averaged 24·4 per 1000, the mean rate during the same period being 16·3 in London and 16·5 in Edinburgh. The 144 deaths in Dublin showed an increase of 11 upon the number in the previous week, and included 5 which were referred to measles, 4 to "fever" (typhus, enteric, or ill-defined), 2 to whooping-cough, 1 to diphtheria, and not one either to small-pox or diarrhœa. Thus the deaths from these principal zymotic diseases, which had been 13, 6, and 8 in the preceding three weeks, rose again last week to 12; they were equal to an annual rate of 1·8 per 1000, the rates from the same diseases being 1·6 in London and 1·0 in Edinburgh. The fatal cases of measles showed an increase upon recent weekly numbers, while the 4 of "fever" were fewer by one than the number in the previous week. The numbers of deaths of infants and of elderly persons did not differ materially from those returned in recent weeks. Seven inquest cases and 4 deaths from violence were registered; and 62, or considerably more than a third, of the deaths occurred in public institutions. The causes of 9, or more than 6 per cent., of the deaths in the city were not certified.

VOLUNTEER MEDICAL STAFF CORPS.—The annual ball is announced to take place at the Westminster Town Hall on the 26th inst. A member of the Royal Family and other distinguished personages are expected to be present on the occasion.

Correspondence.

"Audi alteram partem."

THE ELECTION AT THE COLLEGE OF SURGEONS.

To the Editors of THE LANCET.

SIRS,—In offering myself as a candidate for a seat in the Council of the Royal College of Surgeons of England, I do so as an independent Fellow, aware that there is a strong feeling in the profession that the provincial Members of the Council are too few, and not one of those few lives in this part of the country. I consider that both Fellows and Members need to have a bond of interest in and of union with the College, beyond the fact of their possessing diplomas, and that this would be obtained if the Council were to submit their annual report to a general meeting for consideration before adoption, and if they also convened a meeting of Fellows and Members to consider any heavy expenditure or other matter of great importance. The College of Physicians and the College of Surgeons are working together, and I think it would be well if, as is the custom at the former, the President were elected by the annual meeting of Fellows at the latter. The question of admission of Members to the Council I have read, conversed and thought much about, and conscientiously feel, had I remained a Member, I should not have had any claim to the position. I believe that many Members do not desire it, and I am satisfied that any who aspire to the Fellowship, now that admission to it is practically reduced to passing a good examination and paying a moderate fee, can well, even if in heavy practice, prepare and pass by energy. This I say from experience, as I, when in hard work, passed both examinations in one week. The Fellows were created to be the electors and Council of the College. Those first elected without examination were prominent surgeons to large hospitals, having been raised to that position by their professional brethren and fellow-citizens. The rest have the guarantee of possessing the highest surgical qualification in the world. All Fellows are Members, therefore have the welfare of the Members at heart, and it is well that all advantages of Fellowship should be upheld as an inducement to many who are now Members, and, we regret, do not join us, to take the higher qualification. Also I am opposed to both the Draft Bills for Parliament. The first seeks to throw the Council, with the offices of president and vice-president, open to Fellows and Members as one body. The second, by its wording, "not less than six shall be Members," practically does the same.

If I am honoured by being elected to a seat on the Council, as representing my brethren in the provinces, and having their and all other Fellows' interest at heart, I shall feel it alike a pleasure and a duty to attend the meetings regularly.

I am, Sirs, yours faithfully,

CHARLES STEELE,

Late Surgeon and Consulting Surgeon to the Bristol Hospital for Sick Children; late Senior Surgeon to the Bristol Royal Infirmary; late Lecturer at the Bristol Medical School.

Clifton, June, 1889.

*** The above letter arrived too late for insertion in our last week's issue.—ED. L.

FATAL AFFRAY AT LIVERPOOL.

To the Editors of THE LANCET.

SIRS,—I am much obliged for the fair and candid review of this case which appeared in THE LANCET of June 1st. I must express regret that in my own interest a consultation was not called, but I at the time only considered the interests of the patient and the prisoner, and, the case in my opinion being an urgent one, I acted as your article says a hospital surgeon is justified in doing in such cases. I must also express regret that Mr. Clarke was not summoned in time to attend the post-mortem examination from its commencement; but, upon being referred to, I immediately wrote to the hospital saying that I should be delighted for Mr. Clarke to be present. I was not, however, present, so that as between Mr. Clarke and myself I gave him every opportunity of assuming a hostile attitude if he chose to do so.

But the question of consultation and the presence of Mr. Clarke at the post-mortem examination have nothing to do with the case. The judge laid down the law that if a man injures another, and if the injured man is treated by a surgeon who is acting in good faith, and who is guilty of no gross carelessness or dereliction of duty in what he does, then the assailant must stand by the consequence of the surgical treatment, whether successful or not. After hearing my evidence, Mr. Justice Stephen stated that this was what he was going to say to the jury, and the way in which he silenced Mr. Clarke requires no comment. As he very justly remarked, the statements of Mr. Clarke were not subject matter for evidence in a court of justice, but for criticism among medical men.

The remaining points in Mr. Clarke's letter to which reference may be made are: 1. The opinion expressed that there might be fracture is of no moment, as this did not make any difference as to doing the operation or not. 2. Mr. Clarke's statement as to the trephine showed a want of knowledge of the instrument, and his further statement respecting the use of the gouge would not have been made if he had taken the trouble to make himself acquainted with the literature upon this subject. 3. Mr. W. Mitchell Banks, one of the best-known surgeons in this part of the country, testified to the fitness of the instruments, and this makes it very difficult to understand the peculiar mental attitude upon matters of fact that Mr. Clarke has displayed. 4. I stated clearly before the court that the lateral sinus was opened, but I gave my reasons for this occurrence—an occurrence which, in the opinion of the greatest living authority upon this operation, is unavoidable in similar cases. Mr. Clarke asserts that this was the cause of death, but does not attempt to explain how. There was no loss of blood, and the lateral sinus has been opened without any fatal result. From the testimony of Professor Barron this could have had nothing to do with the death, the cause of death being septic suppurative meningitis. But in spite of this testimony as to fact, Mr. Clarke still continues to state the pathological condition as that of inflammation, without reference to its suppurative and septic character. Why does not Mr. Clarke stand by his original statement as expressed at the post-mortem examination—namely, that the brain was a healthy one—by now acknowledging the presence of inflammation? He admits the inaccuracy of his original statement, and is therefore bound to accept the evidence of such a specially skilled witness as Professor Barron. Mr. Clarke has loudly protested that the line he has adopted was solely taken in the interests of justice. If this is so, Mr. Clarke's action with regard to this matter still remains enigmatical.

I am, Sirs, yours truly,

June, 1889. DAMER HARRISSON, F.R.C.S. ED.

ON PERFORATING THE "MASTOID ANTRUM."

To the Editors of THE LANCET.

SIRS,—The above is so strongly recommended in suitable cases, both as a means of directly combating grave symptoms supervening on otitis media, and also as advocated by Mr. Barker, for the purpose of rendering the tympanum and its mastoid ramifications aseptic as a preliminary to trephining for intra-cranial pus secondary to ear disease, that, in spite of having little that is new to say concerning it, I trust these few remarks may prove of some slight service. To Schwartze we are indebted for a scientific description of how the operation should be performed. After exposing the surface of the mastoid immediately behind the auricle, the chisel is recommended to be used so as to gradually remove the outer shell of bone at a precise spot—viz., immediately below and behind the roof of the bony external auditory meatus—and to penetrate in a direction inwards and slightly forwards and downwards, but never more than five-eighths of an inch for fear of wounding the facial nerve. Operating under these precise limitations the "mastoid antrum" may be perforated, while the danger of opening an extra deep middle fossa of the base of the skull is avoided on the one hand, and that of wounding an unusually advanced lateral sinus is prevented on the other. Hartmann says in 41 per cent. of the skulls he examined the groove for the lateral sinus reached to nearly three-eighths of an inch of the posterior wall of the external auditory canal (see "Manual of Diseases of the Ear," by Dr. Barr, to which I am indebted for these references). In my last case I perforated the bone as close to the external

auditory meatus as seemed possible at the time of the operation, and yet I found at the post-mortem examination that the groove for the lateral sinus had been perforated. Now, although the small valvular opening made into the lateral sinus did not admit of any bleeding—and the incident could not possibly have had any influence on the patient's disease, as the diagnosis of diffuse suppurative meningitis was confirmed at the necropsy,—yet such unpremeditated tapping of the lateral sinus is, to say the least, decidedly unpleasant to the operator. Of course the case is very different where the condition of the sinus is being purposely investigated, as has been recommended quite recently, and in a few instances successfully acted upon. The lateral sinus in my case came as far forward as one-twelfth of an inch of the posterior wall of the external auditory meatus, and it is only after seriously weighing the matter that I can believe it would have been possible for me to have avoided the lateral sinus and successfully opened up the "mastoid antrum." I believe I might have done so by making my perforation a little higher up than was the case. The "mastoid antrum" communicates with the upper tympanic cavity—i.e., the part of the tympanum above the level of the membrana tympani,—and to make sure of opening into it the perforating instrument must therefore be employed quite on a level with the roof of the bony external auditory passage, and, in addition, as close to this as possible.

I am, Sirs, your obedient servant,

Wimpole-street, June 5th, 1889. JAMES BLACK.

THE TREATMENT OF DISEASES OF THE SPINAL COLUMN.

To the Editors of THE LANCET.

SIRS,—Allow me to protest, in the name of modern surgery (and might I add in the name of fair play?), against the whole drift of Mr. Heather Bigg's letter published in to-day's LANCET.

To discuss the treatment of "diseases of the spinal column" without separating spinal caries (Pott's disease) from lateral curvature of the spine (scoliosis), and throws us back two or three hundred years. Dr. Fleming discussed spinal caries and scoliosis under the same title (THE LANCET, April 27th), but he made a definite distinction between these two classes in his paper, and he only ventured to confine his five illustrated cases to those of spinal caries. I object especially to this extract in Mr. Bigg's letter: "In the seventies Sayre's rigid plaster jacket was largely tried; it was to sweep away every other kind of treatment and be a panacea for every kind of curvature. Instead of this, it has itself been displaced in the eighties by a method precisely reverse; and the new departure, rushing into an opposite extreme, proclaimed that, instead of plaster fixity, *absolute gymnastic freedom and therapeutic exercises* would effect cure." If the words I have put into italics were applied by him to cases of lateral curvature of the spine only, I would not have troubled you with this letter. Mr. Bigg has applied them, however, without distinction to cases of spinal caries, as well as to those of lateral curvature of the spine; so I must ask him, through you, to give the name of a single surgeon who has recommended "*absolute gymnastic freedom and therapeutic exercises*" to effect the cure of spinal caries. If he cannot do so, I maintain that by mixing up lateral curvature with spinal caries he lends himself to the mystification of those of the profession who, being in general practice, see little of spinal disease, and that, more often than not, at long intervals. I am, Sirs, your obedient servant,

Queen Anne-street, W., June 8th, 1889. BERNARD ROTH.

GRAVESEND HOSPITAL.—At the annual meeting of the governors of the Gravesend Hospital last week, the Mayor, who presided, stated that the London, Tilbury, and Southend Railway Company had offered to contribute an annual sum of five guineas. He hoped the example would be followed by the Dock and other companies, which reaped the benefit of the hospital when necessity required it. The number of in-patients treated last year was 296, and of out-patients 3752, the latter figure being considerably in excess of the previous year, almost every week many cases of severe accidents being received from the Tilbury Docks. The report was unanimously adopted.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Steaming in Weaving Factories.

THE proposed legislation to prevent the excessive use of steam in the sheds where certain sorts of weaving are carried on in this district is exciting considerable interest amongst both operatives and employers. It appears that the practice came into general use some years ago when what is known as "sizing" began to be practised. This is an operation for loading various materials with "sizing," "clay," &c., with the object of increasing fictitiously the weight and substance of the material so operated upon. To do this in the most efficient manner, and, the employers say, to prevent injury to the operatives' health from the dust &c. which arises from the material which is thus added to the yarn, it is necessary to keep the atmosphere of the rooms in which the work is going on saturated with moisture. The operatives, on the other hand, allege that the constant breathing of air saturated with steam induces lung diseases and susceptibility to cold generally, and they obtained an interview with the Home Secretary, to press upon him their view of the matter. The employers also have waited upon Mr. Matthews, and urge him not to support the legislative proposals, as no great injury had been shown to arise to the health of the workpeople, and that the proposed restrictions would heavily handicap English manufacturers. It would appear to be desirable that evidence from medical men who have had experience amongst these operatives should be obtained, and from others who are able to give a skilled and unbiased opinion respecting the practice referred to.

Sweating.

Evidence was given from this city before the House of Lords' Committee on "Sweating" in Manchester, and allusion was made by the Chief Inspector of Nuisances to the action which was taken by the corporation as the result of THE LANCET inquiries made in Manchester about twelve months ago. It was admitted that a thorough examination of the different workshops by the officials was one of the immediate results of that inquiry, and he practically admitted that there was considerable room for improvement in the overcrowding and insanitary conditions of many of the workshops. Much of the cheap tailoring work is in the hands of poor Jews, whose dirty habits require a deal of looking after. He stated that he had no power of entry into private houses, where much of the work was carried on.

"Filthy" Manchester and Salford.

The sanitary condition of both Manchester and Salford still continues to occupy a large share of attention, and scarcely a day passes without newspaper correspondence or reference to some of the worst slums. At a public meeting held recently under the auspices of the Sanitary Association, presided over by Dr. Arthur Ransome, and supported by the Bishop of Salford, Principal Greenwood, many members of the corporation, medical men, and others, a paper was read by Dr. Thresh, who had personally and minutely inspected a whole district in one of the worst parts of Ancoats, and the picture he drew (confirmed by all who have any acquaintance with the same) was almost appalling. All speakers expressed strongly their disapproval of the filthy and almost horrible conditions existing in and about these homes(!) of the people, and a resolution was passed urging the corporation to take more active measures for their abolition or abatement. There is no doubt that by the expressions of public opinion which have of late been heard the Unhealthy Dwellings Committee will be greatly strengthened in their endeavours to clear away some of the worst of these slums. In the adjoining borough of Salford things are not much better. At the last meeting of the Council it was admitted that there were between 200 and 300 cellar dwellings there, and after several councillors had got up to denounce their sanitary shortcomings the Mayor appealed to the Council "not to wash their dirty linen in public." He knew full well of their "chamber of horrors," and it was proposed to appoint a special committee to deal with it.

The Salford Fever Hospital.

The last proposed site for the new Fever Hospital appears to be unavailable, and so the Local Government Board are

to be asked to report upon the site into which they recently made inquiry. The inhabitants of Newton Heath have made strong protest against any arrangement being entered into by the Royal Infirmary to receive the Salford cases at the Monsall Fever Hospital, although a large extent of open land is available there, and already patients are received from much greater distances than Salford. The arrangements with the surrounding health authorities for treating infectious cases at Monsall are just being renewed for another three years.

Superannuation Fund for Nurses.

In days gone by it was the custom at the Infirmary to pension off its old nurses who, after long service, became unfit for further work, but for some years past this has been abolished. A donation of 25 guineas from the employer of a grateful patient, who had been treated in the wards there, will, it is hoped, form the foundation for a superannuation fund for the nursing staff. Mr. Walter Whitehead has given another 25 guineas towards it, and the Board have accepted the suggestion which accompanied these donations.

Carnival Week.

In Manchester and Lancashire generally Whit-week may fairly be styled "carnival week," little work and much play being the order of the day from Monday morning to Saturday night. To-day the streets are thronged with thousands of Sunday-school children in procession, who will for the next day or two be making excursions by train and 'bus in all directions. At the latter half of the week some thousands will be at the races; while a more healthful and harmless form of relaxation is found for thousands more in the various Volunteer camps. Some three thousand of these latter left Manchester on Saturday. The 1st, 2nd, and 3rd Manchester Rifle Volunteers are encamped at Skegness, with Surgeons-Major Armstrong and Dean to look after their bodily welfare; and the Manchester Artillery are under canvass at Southport, with Dr. H. Tomkins and Mr. Daly in medical charge.

Manchester, June 11th.

NORTHERN COUNTIES NOTES.

(FROM A CORRESPONDENT.)

South Shields.

DR. WHAMOND, of Jarrow, has made a good case out for increase of salary as medical officer of the Jarrow district, and his facts are instructive as showing the amount of work done. The average number of cases for the last five years attended by him was 1059 per annum, being an increase of 55 per cent. since 1883; his drug bill for paupers had increased 75 per cent.; and he had personally to attend in the Jarrow district to more pauper cases than all the other medical officers of the union put together. I am happy to say that Dr. Whamond's moderate and reasonable request is likely to receive every consideration from the guardians.

The Medical Officership of Health for Westmoreland.

It has lately been resolved by the sanitary authorities of Westmoreland to appoint a medical officer of health to take charge of the whole county, to reside at Kendal and devote his whole time to the work. Westmoreland, of course, is thinly populated in most parts, and has few large towns, but the work must involve many long journeys.

Newcastle-on-Tyne.

The work of preparation for the meeting of the British Association in Newcastle is now far advanced, considering that it does not commence before the first week in September. I hear that the Senate of the University of Durham propose to confer degrees upon some of the distinguished visitors. Newcastle may now be said to be in a healthy condition, with the exception of a somewhat extensive epidemic of measles, mostly confined to the poorer classes; at the same time, the type is mild. Mr. J. A. Angus, who has extensive experience as a local medical officer, informs me that he hardly ever remembers a more diffused epidemic of this disease in Newcastle. The typhoid epidemic still lingers in some northern districts of the adjoining county of Durham, fresh cases being noted almost every day at the same time; but the virulence of the disease has very much abated, so that from this fact it is hoped that it will soon, as an epidemic, altogether subside.

Newcastle-on-Tyne, June 12th.

EDINBURGH.

(FROM OUR OWN CORRESPONDENT.)

Burial Reform Conference.

DR. PEEL RITCHIE, President of the Royal College of Physicians, occupied the chair at a fairly representative meeting held last week to discuss the question of Burial Reform. In introducing the Rev. Dr. Lawrence, hon. sec. of the Church of England Burial Reform Association, the Chairman said that the nature of the ground in some of the old graveyards around Edinburgh was not very suitable for interments, and, instead of there being a speedy dissolution of the body in the ground, he believed that, in some instances, fifty years might pass before complete dissolution occurred. The Rev. Dr. Lawrence urged that the true principles for the burial of the dead were to recognise the decomposition of the dead as natural and necessary, and to provide against their becoming offensive to the living. The following resolutions were passed unanimously:—"1. That the time had arrived when a united effort should be made on the part of ministers of religion, members of the medical profession, sanitarians, and persons of influence generally, to put a stop, as far as is possible, to the prevalent repulsive and utterly indefensible practice of storing up in the neighbourhood of great populations vast accumulations of human remains in every stage of arrested and prolonged decay; and that the present mode of burial in solid coffins, in vaults, or n already crowded graves, is seriously and increasingly dangerous to the public health. 2. That fresh legislation is necessary whereby (*a*) the authority over burial places now divided between the Home Office and the Board of Supervision be concentrated in one or the other, and that the establishment and supervision of all new cemeteries be under the control of that one public authority; (*b*) exclusive and perpetual rights in the soil be not permitted; (*c*) overcrowding of the dead be made a legal offence, liable to a penalty on summary conviction before the magistrates; and (*d*) the land selected for new cemeteries be certified as suitable for the dissolution of human remains before it be so used, and, where necessary, the soil be properly prepared. 3. That a provisional committee be formed for the purpose of considering the propriety of originating a Burial, Mourning, and Funeral Reform Society for Edinburgh."

Edinburgh and District Water Trust.

In the fortnightly statement issued by the Edinburgh and District Water Trust it was noted that at the last reading there was stored in the reservoirs, 2,360,271,000 gallons, or 99,797,000 less than at the previous reading a fortnight earlier. This is equivalent to a supply of 40·41 gallons per diem to each individual for 377,800 persons. This statement is of very considerable interest when placed alongside the report of the Waste Water Meter Company's report to the Water Trust. The company reports that, after careful measurement of waste and inspection of taps, joints, &c. in the various districts in Edinburgh, they can effect, and have effected, a saving of 1,800,000 gallons, or 16 per cent., on the supply (11,000,000 gallons) now used for domestic purposes. Such a saving would, says the report, represent a water-supply of 36 gallons per head for all purposes to a population of 50,000. At the present rate of increase in the population the whole of this saved water would be required in six years from this date. Even with the present population a series of long dry seasons would render the Edinburgh supply totally inadequate. It seems to be an important question, therefore, and one that will require immediate settlement, What is to be done for a future water-supply? With past experience to guide them, it will be strange if a peddling policy is adopted by the Water Trust. The best interests of the ratepayers will be served by a bold and thorough consideration of all the plans that have been suggested.

Diseased Meat in Edinburgh.

During the past week the Edinburgh inspecting authorities have been putting themselves thoroughly in evidence. Two prosecutions have been instituted. In one case the defendant pleaded guilty to having 321 lb. of beef, as or

for human food, of an unsound description, and unfit for food. In the evidence it was stated that the animal from which the meat had been taken had evidently died from disease. A penalty of £10 was imposed, with the option of thirty days' imprisonment. In the second case the defendant pleaded not guilty. The meat was soft, watery, and very dark, and was totally unfit for human food. Here, again, a heavy fine (£15) was imposed, with the alternative of forty days' imprisonment. The inspection of meat is certainly becoming more strict, and not before it is time. During May, 22,571 lb. of meat were condemned as unfit for human food, and seized. Of this, 15,414 lb. were consigned from the country, and 7157 lb. from the city. The fines inflicted in the above cases should have a salutary effect on others than those immediately involved.

New Asylum for the Insane.

Plans for a new asylum at Craig House have been prepared for, and approved by, the directors of the Morningside Asylum. Full details of the proposed building will probably appear in THE LANCET, but it may now be stated that it is described as one of the most important buildings erected in Edinburgh or its vicinity for many years. It will consist of eight central wards, four villas and two hospitals, exclusive of old Craig House, grouped around spacious drawing, reception, and billiard rooms, and the accommodation provided for the administrative department. These buildings will afford accommodation for 160 patients, eighty of each sex, and they will be so constructed that the patients may be arranged in them, classified according to their circumstances and mental condition. The cost of the new asylum is estimated at from £50,000 to £60,000.

Edinburgh, June 11th.

DUBLIN.

(FROM OUR OWN CORRESPONDENT.)

The Vice-Presidency of the Royal College of Surgeons, 1890.

MR. ROBERT H. MOORE has intimated his intention of seeking the votes of the Fellows for election to the Vice-Presidency of the College next year. Mr. Moore is a well-known dentist, is second in Fellowship seniority of the members of Council, and will be strongly supported. He will be opposed by Mr. Carte, surgeon to the Royal Hospital, Kilmainham, who has been a member of Council of the College for some years, but lost his seat at the last election. It is a subject of regret to the friends of both candidates that a contest for the Vice-Presidency should ensue; at the last election it was thought that Mr. Croly would be opposed by Mr. Moore, who, however, withdrew his opposition some time before the annual meeting for the election of office-bearers of the College.

Royal University of Ireland.

At a recent meeting the Senate made arrangements to supply vacancies in the list of examiners caused by death or serious illness. They also directed that a meeting of Convocation should be summoned for Aug. 1st next, for the purpose of filling the vacancy in the Senate caused by the death of the late President of the Belfast College. A second vacancy also will arise by the termination of Mr. J. J. Shaw's three years' tenure of office.

Pharmaceutical Society of Ireland.

A meeting of the members of this Society was held last week for the purpose of considering their position in connexion with the proposed Pharmacy Act (Ireland), 1875, Amendment Bill. After some discussion a resolution was adopted founding an association to be called "The Irish Pharmaceutical Chemists' Association," for the furthering of the interests of the members. A circular will be issued to all licentiates, asking for their co-operation and assistance.

Royal Medical Benevolent Fund Society of Ireland.

The forty-seventh annual meeting was held last week in the library of the Royal College of Surgeons, presided over by Dr. Henry FitzGibbon, President of the College. The number of applicants for assistance (ninety-eight) was larger than last year, and, as there was a falling off in the subscriptions, it was found necessary to overdraw the bank account. The apathy shown by the majority of Poor-law medical officers in Ireland in not supporting this charitable institution, mainly established for their benefit or that of their families, must have a discouraging effect on the general body of medical practitioners in this country. Of the ninety-eight applications for assistance, eight were from medical men, eighty-two from the widows of medical men, and eight from their orphans. The sum of £1187 10s. has been awarded to the various applicants.

Irish Medical Association.

The jubilee general meeting of this Association was held in Dublin on June 3rd. The annual report of the Council stated that during the past fifty years the Association had done excellent work bearing much good fruit, especially as regards the medical officers of the public departments of the State in Ireland, with which members of the profession are intimately connected. The Council regret that their efforts to secure any amendment of the laws governing the superannuation of Poor-law medical officers have proved ineffectual. Under the present laws it is altogether discretionary with boards of guardians to award such retiring allowances as may be sanctioned by the Local Government Board, while it is at the same time optional with them positively and definitely to refuse to vote any award whatever. The following resolutions were adopted at the meeting:—"That the Council are hereby requested to take such steps as may appear to them expedient, with a view to have passed the Bill to amend the Union Officers' Superannuation Acts heretofore promulgated by this Association, in order that as many as possible of the abuses of the present system may be removed. That, should any alteration or amendment of the Factory Act of 1878 be undertaken, it is advisable that it should be an extension of the offices of the certifying surgeon, in order to render it more effectual in promoting the physical well-being of the *employés* in factories and workshops, in obviating the injurious effects of employment, and in arresting the progress of contagious diseases among them; and that the Council of the Irish Medical Association be requested to support the purport of this resolution. That, in the interests of the public service, it is desirable that the rule in operation in all departments of the State, which allows to every officer a reasonable period of leave of absence each year at the public expense, should be extended to the medical officers of the Poor-law service, and that this arrangement would undoubtedly tend to enhance the efficiency of the service. That the thanks of this Association are hereby gratefully tendered to the professional and general press for their constant advocacy of the fair claims of the medical profession, as well as for having given publicity to the proceedings of the Association, with reasonable comment." A vote of thanks to the out-going President terminated the proceedings. The members and their friends dined together in the evening, the chair being occupied by the new President of the Association, Dr. A. H. Corley.

County Galway Infirmary.

In the Queen's Bench last week an application was made for a *mandamus* directed to the governors of this institution to proceed to an election for a surgeon. An election had taken place, Dr. Coulahan having been appointed, but it had proved void, some of the voters not being duly qualified. The registrar in January last was requested to convene a meeting for the purpose of electing a surgeon, but declined; however, a meeting was held in February, with the result that a motion for the holding of an election was negatived. It is contemplated by some parties to place the management of the infirmary on a new basis, and in the meantime a majority of the governors do not wish to make any permanent appointment of a surgeon. The Court unanimously granted the order, and reserved the question of costs.

Conjoint Scheme of the Colleges of Physicians and Surgeons.

Candidates at the First, Second, and Third Professional Examinations will for the future get credit for each subject in which they pass; and in any subject in which they fail they will be referred, and will have to present themselves at a subsequent examination in the subject in which they have failed. The examiners will recommend to the committee of management the period to which and in what subjects each candidate shall be referred to his studies, who may authorise the re-examination of the candidate at such examination as they may consider desirable. These regulations will come into force at the forthcoming July examination; but the Committee of Management are contemplating other changes, which, when agreed upon by both Colleges, will materially alter the present examinations.

Zymotic Diseases in Ireland.

During the March quarter the total number of deaths from the principal zymotic diseases amounted to 1275, being 998 under the number for the corresponding quarter of 1888, and the zymotic death-rate was, with one exception, the lowest for any quarter since registration commenced.

The governors will elect a surgeon to the County Clare Infirmary on the 26th inst., in the room of the late Dr. Cullinan. The salary attached to the post is £94 a year, with a residence.

Mr. Jennings, medical officer of the South Dublin Workhouse for the past twenty-eight years, has resigned.

Dublin, June 11th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Things which are not better managed in France.

LONDON, with its "*brouillards épouvantables*," and its "*climat abominable*," has no doubt these things as drawbacks, added to other imperfections which your *cher voisin* is not slow to remind you of, should you in the course of a friendly conversation betray an inclination to draw anything approaching a comparison between the gayest of capitals and your merely huge city on the Thames, remarkable mostly, in his good-natured view, for its mixture of "weather" and soot, its curious mingling of squalor and plutocracy, its Whitechapel mysteries, its "*gens pratiques*" (not always in the best sense, however), its seething masses, and consequent unwieldiness. Comparisons are "odorous," and, without a doubt, a visitor to Paris during the summer months would be able in the course of a casual stroll to derive, through the medium of the Schneiderian membrane, sundry sudden and unexpected proofs of the literal correctness of the dictum. The odours may be described as not few in number, but, to ordinary unpoetic nostrils, unique and bad in bouquet. Cologne, we are told by Coleridge, was remarkable for as many as seven smells, but this must have been before the advent of the science of hygiene. Now the fragrance of the odours in this gay city and the perfection of its water leave yet much to be desired in the way of sweetness and purity. These are reflections easily and legitimately made, and which cannot be refuted. That, indeed, this Paris—which prides itself on being of "le premier ordre," "la ville lumière," as Victor Hugo loved to style it, beyond cavil a most beautiful place, a centre of universal attraction—should be deficient in respects so essential is, to say the least, astonishing. Associated, of course, with these two desiderata are the great problems of drainage and sewage, which, for the sake of the fair fame of this city and the credit of hygienic science, are, let us trust, not yet definitely solved. But amongst the things most urgently needing reform, and which should be even first in the order of precedence of things urgent—for on it immediately depend the very lives and well-being of the community—is our water-supply. Although the alarm concerning it is sounded as regularly as the summer recurs, nothing is done to better it, or is likely to be done for some time. It is, I believe, true that a Bill with a remedial end in view is lying somewhere in the dust-laden and congested department of the archives of the Chamber of Deputies devoted to economic subjects marked for discussion. Unfortunately deputies are far too deeply involved in polemics to be likely to concern themselves seriously at present with mere domestic legislation, and it is impossible to say when they will. Yet the matter is admitted to be in reality one that calls loudly for redress. Already, as pointed out by the medical as well as the lay Parisian press, although we have had hardly more than a week of sultry weather, our water-supply, properly so-called, has run short, and we are compelled to content ourselves with that of the Seine in four "arrondissements" or vestry districts of Paris. There is no gainsaying the fact that the turning on of Seine water for domestic purposes is a discredit and reproach to any Government as well as a serious menace to the public which should not be permitted to continue. Another thing deplorably inefficient in this much-frequented resort is the omnibus service. The reason of this will be at once apparent when it is stated that the whole of the omnibus arrangements of the city are in the hands of one company, which has a legal monopoly. The supply of vehicles is wholly insufficient. Moreover, you are not expected to trouble the conductor, who is quite above touting for passengers, to stop to take you up except at the "bureaux en route," at many of which you may often see at the end of their day's outing crowds of fatigued delicate women and exhausted children, as well as burly men, "numéro" in hand, waiting their turn for this occasional vacancy, and illustrating the lengths to which human patience can be got by practice and education. How any intelligent community claiming to be in the vanguard of advancement can tolerate such a state of things for a day those who are acquainted with the omnibus services of London and New York may well marvel. It may, indeed, then be in truth set down that the water and omnibus services of Paris are amongst the "things that are *not* better managed in France."

The Practice of Charlatans in Paris.

I recently gave you some account of the *modus operandi* of the innumerable "false pretenders," bogus doctors, and quacks of Paris, together with the agitation in the French press anent them and the action which it was proposed the authorities should take to suppress an evil much on the increase since the opening of the Exhibition. I pointed out how readily any one amongst the thousands of English people visiting Paris during this festive season may be trapped, should he find himself in need of medical advice, into consulting one of this fraternity of *soi-disant* English, French, or American doctors (as occasion demands), some of whom bedeck themselves with the false garb to a nicety, even to the detail of an English name. I referred to the difficulties the authorities would surely meet in trying to put down all this false dealing, and I predicted the survival of the charlatans, or at least the fittest amongst them. For "the ways that are dark and the tricks that are vain" of these "poseurs" excel anything that Ah Sin was equal to. Now, one of the ways in which the trick can be done is for an adventurer to get himself "recognised" by the police as, say, for example, a masseur, this not necessarily implying the possession of a diploma; then, provided his linguistic powers, name, and ability to look wise things or utter grandiloquent platitudes are in his favour, he can at once advance out of this too humble subterfuge, and become "known" as an "English doctor," and the confiding son of Albion will pay his fee in the belief that he is being advised by a veritable British graduate. He is apt, however, to wax wroth should he learn—not from the adventurer, *bien entendu*—that he had never been even inside a British medical school, and that he bases his claim to the distinctive designation assumed and description adopted on being English by birth, which may be true, or in name, which may be false, but neither of which extenuates in his just conviction the obtaining of napoleons by deceptive pretences. Should the pretended English doctor now see danger of prosecution lurking ahead, he may retire for a time to the shelter of his recognised position of unpretending but useful *masseur*, where safer, although smaller, profits will attend him while the danger passes or he retreats to another *quartier*. "Covering," as with you, is also unfortunately in vogue here, chiefly, however, amongst the vulgar advertising coterie, whom people therefore consult with their eyes open. But one of the most adroit plans is to get in league, through the potent influence of bribery and dividing profits, with the hotel underlings. This has to be done secretly, without in general the knowledge of the proprietor, and is a method reserved largely to him who, by virtue of his intimate acquaintance with our mother-tongue, is able to lie in ambush for the English-speaking visitors, and out of which he steps on a given signal with the correct demeanour of the traditional English physician recommended by the hotel menial as the best (albeit perhaps not so widely known as his merits deserve) specialist in, say, diseases of children should it be a question of one of your offspring's health, or in diseases of the liver should he diagnose from your remarks that you attribute your physical troubles to difficulties with that ever-sinning organ. But surgical operations, even of a minor sort, our shady *confrère* religiously avoids, for here knowledge is power, or at any rate alone serves, whereas chicanery and ignorance are likely to land him in trouble. Nor is it at all easy for our English visitors in search of medical advice to verify the interested statements that are thus made to them. It is even certain that the hotel people themselves are not infrequently hazy as to the precise medical status of those

they are questioned about or may suggest; for unfortunately there is no official work issued by the Government or Faculties of France corresponding to your Medical Register and Directory which can be readily consulted by the sick stranger or his friends. Cheap medical directories bearing no official warrant whatever, but compiled by private individuals at discretion and sold by medical booksellers, exist in quantity as numerous as unauthorised guide-books to the Exhibition and Paris, and are about as, medically speaking, misleading. Should, however, the project now mooted by the French authorities be carried out of having a list of the medical men of Paris prepared under the auspices of the Prefecture of Police, a copy of which could be seen at every metropolitan police-station, the idea might with advantage be taken a step further, and another copy supplied to the hotels and libraries which the visitors could look into for themselves. In the meanwhile the only reliable and safe course for them to follow is to consult any of our eminent and well-known French medical brethren, many of whom speak English; or to refer to the English Medical Directory, which can be seen at most libraries, and which contains in its foreign section the names and addresses of registered British medical practitioners throughout the world.

Paris, June 10th.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Unveiling the Statues of Medical Celebrities.

THE ceremony of unveiling the statues of Hyrtl, Schuh, Van Swieten, Quarin, and Stifft took place last week at the new University building, in the presence of a large assembly of professors and students. After a short introductory speech by the Rector Magnificus, Professor von Lang, Professor Albert delivered an address, dwelling upon the merits of Quarin, Swieten, and Stifft as the founders of the first Vienna Medical School, while Hyrtl and Schuh were lauded as being the representatives of the second Vienna Medical School at its most flourishing period. Professor Hyrtl, who was received with loud and continuous cheers by the enthusiastic audience, then addressed the assembly in classical Latin, and displayed great rhetorical power in spite of his advanced age of seventy-eight years and his impaired health. His address, which was of considerable length, dealt chiefly with the importance of anatomical study and of ancient anatomy, and evoked great applause.

The Death of Professor Ultzmann.

The Vienna University has sustained another severe loss by the sudden death of Professor Ultzmann. He was seized during an excursion trip to the Semmering with an apoplectic fit, to which he succumbed after a few hours. Professor Robert Ultzmann was born on September 30th in 1842 at Kaschau (Hungary). He pursued his medical studies at Vienna University, where he took his degree in 1867. He was then appointed assistant to the Pathological Chemical Institute of Professor Heller, who had a high reputation as a urologist. In 1869 the deceased became *Operationszögling* at the surgical clinique of the late Professor von Dümreicher, and in 1872 he qualified as *Privat-docent* for diseases of the uro-genital system. His great practical and scientific merits were acknowledged by appointing him professor extraordinary in 1885. His lectures on Diseases of the Uro-genital Organs at the Poliklinik always attracted great attention, and were attended by medical men from all parts of the world. Ultzmann was a very skilful lithotomist, and helped greatly to improve the treatment of chronic urethral diseases. Of his numerous works we may mention: "Anleitung zur Untersuchung des Harnes mit besonderer Berücksichtigung der Erkrankungen des Harnapparates (1871)," by Ultzmann and K. B. Hofmann; and the "Atlas der physiologischen und pathologischen Harnsedimente."

Vienna, June 10th.

A HOSPITAL FOR BALLYSHANNON.—The late Mr. William J. Shiel, M.D.Edin., M.R.C.S.Eng., F.R.C.S.Irel., of Clonmel, county Tipperary, bequeathed £40,000 for the erection and endowment of a hospital for the sick poor at Ballyshannon.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Death of Mr. Irving Bishop, the Mind-reader.

MUCH interest has been felt in this city during the present week in the incidents pertaining to the death of Washington Irving Bishop, the famous mind-reader. Mr. Bishop was at the Lamb's Club, at dinner, and during the evening gave exhibitions of his singular powers. About 1 A.M., a gentleman who was very sceptical as to Bishop's mind-reading pretensions was selected as the subject of the experiment. This gentleman was requested to select some word, and to do so he took up a book, when his eye fell on the word "Townsend," which he selected for the test. Bishop placed one of his hands on the gentleman's forehead, and almost immediately wrote the word correctly on a piece of paper, beginning with the last letter and spelling backwards. He was then securely blindfolded and the book handed to him, when he turned the leaves over rapidly till he came to the page from which the word had been taken, and then he put his pencil on the name. Almost immediately after performing these feats Bishop passed into a cataleptic trance. As he was known to be subject to attacks of this kind, and had even been charged with simulating them for the purpose of creating a mysterious effect, no great alarm was felt. In about fifteen minutes he recovered, joked about his seizure, and gave some further exhibitions of his powers, and at their close passed again into a trance state, during which his body and limbs became perfectly rigid. He was placed in bed, and a physician, who had attended him previously, with an assistant, took charge of him. Several times during the night and morning Bishop recovered consciousness, but would soon lapse into a cataleptic rigor. At 8 A.M. one of the physicians decided that death was inevitable. Electricity and other means were now employed, but without effect, and at 12.10 P.M. he was pronounced dead, the cause being coma. The body was placed in a tight box and removed to an undertaker's. Bishop had at some time expressed a wish to have his brain examined after death. The consent of his friends present having been obtained, a necropsy was made at a quarter before four o'clock, scarcely more than three hours and a half after death. Nothing was found to account for his singular death. The brain was large for a man of his size. The mother of Bishop arrived on the following day, and immediately declared that her son had been killed by the necropsy. She had known him to remain in a cataleptic state all day, and recover. The coroner was therefore summoned to investigate the circumstances of his death. The two attending physicians and the physician who made the necropsy were held to bail to await the result of the inquest. A second necropsy was made by experts, and the brain was minutely examined. A hæmorrhagic effusion was found at the origin of the pneumogastric nerve of sufficient extent to cause immediate death, in the opinion of those who testified. The other organs were healthy. Dr. Spitzka, a very reliable authority on the anatomy and pathology of the brain, stated at the inquest that hystero-catalepsy was very rare in America; he had known but two cases on record where minute hæmorrhage at the base of the brain was discovered after death from catalepsy. In each of these cases the lesion was the same as in this case, and the death was the same. This made the third case, and the cause of death on the certificate was, in his opinion, correct. The physicians who assisted at the necropsy were all of the opinion that life was extinct at that time. The verdict of the jury was "Death from coma." The physicians were exonerated from all blame, but were mildly chided for being over-zealous in making a necropsy so soon after death.

International Congress of Medical Jurisprudence.

A Congress with this title is announced to meet in New York on June 4th next. It is to be held under the auspices of the Medico-Legal Society, but the following five papers are announced from other countries than the States—viz.: Dr. C. Spadaro (Puglia, Italy), "Nouveau Procédé pour la Recherche des Cristaux de l'Émine du Sang Humain"; Dr. Norman Kerr (London), on "Criminal Responsibility in Narcomania"; Mr. Conolly Norman (Ireland), on "Feigned Insanity"; Mr. A. Wood Renton (London), on "Medical Expectism in the Old World";

Hon. Daniel Jordan (New Brunswick), on "Life Insurance." The remaining papers relate chiefly to questions of insanity and inebriety. The Congress is to continue four days.

New York, May 30th.

THE ALLEGED ATTEMPT AT EXTORTION.

WE have been asked to publish the following expression of sympathy with Mr. Malcolm Morris in the painful position in which he has been lately placed. We do so with pleasure, and may add our entire concurrence with the terms in which the sympathy is conveyed.

"We, the undersigned, members of the medical profession, beg to express our cordial sympathy with Mr. Malcolm Morris, and our appreciation of the manly and straightforward manner in which he has recently acted under exceptionally trying circumstances. We also beg to assure him of our entire confidence in his integrity and uniformly upright conduct.

(Signed)

"Andrew Clark, M.D.	Henry Gervis.
James Paget.	A. T. Norton.
Alfred B. Garrod.	Sidney Phillips.
Richard Quain.	John Anderson.
J. Matthews Duncan.	W. A. Meredith.
J. Crichton Browne.	Seymour Taylor.
W. H. Broadbent.	A. Quarry Silcock.
G. Anderson Critchett.	Stephen Mackenzie.
George P. Field.	Edwin Saunders.
William MacCormac.	William Rose.
Thomas Smith.	Watson Cheyne.
Geo. Lawson.	W. M. Ord.
J. G. Glover.	Thomas Wakley.

"Any member of the profession wishing to express his sympathy with Mr. Malcolm Morris by signing the above resolution is requested to kindly inform Dr. Sidney Phillips, 21, Upper Berkeley-street, W."

THE SERVICES.

ARMY MEDICAL DEPARTMENT.—The Army Orders for June state that a new edition of the Regulations for the Army Medical Department, under the title of "Regulations for the Medical Services of Her Majesty's Army," is in preparation. Part II., "Manual for the Medical Staff Corps," having been approved, will be issued to all concerned. General Order 6 of 1886, and the "Manual for the Medical Staff Corps" issued therewith, and General Orders 53 and 69 of 1886, are cancelled. Paragraphs 260 to 266, 268, 293, 297 to 335, 337, 338, 343 to 346, 348 to 384, 427 to 473, 499, 846 to 853, and Appendix No. 3 of the Regulations for the Army Medical Department, 1885, as well as Clauses 93 and 123, Army Circulars, 1886, and Clause 201, Army Circulars, 1887, are also cancelled.

ARMY MEDICAL RESERVE OF OFFICERS. — Surgeon Geo. Richd. Turner Phillips, Pembroke Yeomanry Cavalry, to be Surgeon, ranking as Captain (dated June 12th, 1889).

ADMIRALTY.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeon William Roche has been placed on the Retired List, with permission to assume the rank of Deputy Inspector-General of Hospitals and Fleets (dated June 8th, 1889).

VOLUNTEER CORPS. — *Artillery:* 1st Shropshire and Staffordshire: Acting Surgeon E. Cureton to be Surgeon (dated Feb. 1st, 1889).—1st Volunteer (Hampshire) Brigade, Southern Division, Royal Artillery: Bernard J. Guillemard, M.D., to be Acting Surgeon (dated June 8th, 1889).—*Rifle:* 1st Volunteer Battalion, the King's Own (Royal Lancaster Regiment): Acting Surgeon J. H. Irvin resigns his appointment (dated June 8th, 1889).—3rd Volunteer Battalion, the Hampshire Regiment: The surname of the Surgeon whose promotion to Surgeon-Major, ranking as Major, was announced in the *London Gazette* of May 28th, 1889, is Rickards, and not Richards, as therein stated.—1st Volunteer Battalion, the Prince of Wales's (North Staffordshire Regiment): Surgeon-Major (ranking as Major) W. Dawes resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Battalion on his retirement (dated June 8th, 1889).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT an ordinary meeting of the Council held on Thursday, the 13th inst., the minutes of the Extraordinary Council meeting of May 16th were read and confirmed.

The President reported that on the 24th ult. H.R.H. the Prince of Wales unveiled the statue of Her Majesty at the Examination Hall.

Dr. V. Dormer Harris was elected Examiner in Physiology for the Membership Examination, and Mr. D'Arcy Power Examiner in Physiology for the Fellowship Examination.

The report of the Committee on the Nomination of Professors and Lecturers was postponed until the Quarterly Council in July.

A letter of May 24th from Mr. Wilde was read stating, with reference to the action Steele *v.* Savory, that the plaintiffs have been granted a fortnight's further time in presenting their claim.

A letter of the 5th inst. from Mr. Wilde was also read, stating that the new bye-laws have been signed by the Secretary of State, the Lord Chancellor, and the Lord Chief Justice, and are now, therefore, in full force.

A letter of the 7th inst. from Dr. Edward Liveing, Registrar, was read, stating that the Royal College of Physicians have appointed a committee to consider and report to the College on the recently issued report of the Royal Commission on a University for London, and inviting, on behalf of the committee, the opinion of this College on the desirability of further joint action of the Royal Colleges in this matter.

The Council agreed to appoint a committee, but the election of members to serve on it was deferred until the July meeting of the Council.

By permission of the Council, Mr. Willett moved and Mr. Macnamara seconded the following proposition—viz., "That it be referred to the Committee of Management to consider and report to the two Colleges whether any, and, if so, what, alterations should be made in Clause 12, Sec. 3, of the regulations relating to dresserships."

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the necessary Examinations on May 20th, 21st, 22nd, 23rd, 24th, and 25th, were at a meeting of the Council on the 13th inst. admitted Fellows of the College:—

Martin, John M. Harding, L.S.A., Blackburn, Lancashire; Membership dated July, 1874.
Blakesley, Henry John, L.R.C.P.Ed., Leicester; Nov., 1890.
Russell, Robt. Hamilton, L.R.C.P.Lond., St. Luke's Hosp.; July, 1882.
Gunn, Donald Stilwell, L.R.C.P.Lond., Gower-street; July, 1883.
Gray, John Power William, L.S.A., Notting-hill; Aug., 1884.
Spong, Charles Stuart, L.S.A., Chatham; Aug., 1884.
Leech, Priestley, L.S.A., Halifax, Yorks.; Jan., 1885.
Flemming, Percy, M.D.Lond., Regent's-park-road; Jan., 1885.
Edge, Frederick, L.R.C.P.Lond., Manchester; Oct., 1885.
Parsons, Fredk. G., L.R.C.P. Lond., Lambeth Palace-rd.; Jan., 1886.
Redmayne, Thos., M.B.Cantab., Gateshead-on-Tyne; April, 1886.
Barclay, Wilfred Martin, L.R.C.P.Lond., Clifton; July, 1886.
Drew, Henry William, L.R.C.P.Lond., Croydon; July, 1886.
Thompson, Jas. Edwin, M.B.Lond., Dudley; July, 1886.
Jones, Sydney Harold, L.S.A., George-st., Hanover-sq; July, 1886.
Smith, Hugh, M.B.Lond., Med. Depart., Gen. Post-office; Oct., 1886.
Brown, Herbert Henry, M.B.Lond., Harrow; Jan., 1887.
Crook, Herbert Evelyn, L.R.C.P.Lond., Colchester; Jan., 1887.
Balgarnie, Wilfred, M. & O. 20-1-87, St. Barthol. Hosp.; Jan., 1887.
Brook, Wm. Frederick, L.S.A., Fareham; May, 1887.
Davenport, Cecil John, L.R.C.P.Lond., Hampstead; May, 1887.
Jones, Oswald Meredith, L.R.C.P.Lond., Llandilo; June, 1887.
Gilford, Hastings, L.R.C.P.Lond., Reading; Nov., 1887.
Ross, Arthur MacLeod, M.B.Edin., Liverpool; May, 1889.

Fifty-two candidates presented themselves for examination, of whom thirty-two passed, including eight candidates who have not yet attained the legal age (twenty-five years), and twenty failed.

The following having passed at a previous meeting of the Court of Examiners, and having now attained the legal age (twenty-five), were also admitted Fellows:—

Wacher, Sidney, L.R.C.P.Lond., Eddington, Canterbury; Membership dated Jan., 1886.
Street, Aston, M. & O. 30-7-88, Addenbrooke's Hospital; July, 1888.

The following gentleman having passed the necessary examination, and having obtained a medical qualification, was admitted a Member of the College :—

Smith, Robert Edward, L.S.A., Sutherland-avenue, W.

ROYAL UNIVERSITY OF IRELAND.—The following Honours, Exhibitions, &c., have been awarded :—

Second Examination in Medicine.—Exhibition : Second Class, John J. Bourke. Honours : J. J. Bourke, J. J. Fitzgerald, and J. A. Adams.

Third Examination in Medicine.—Exhibitions : Second Class, P. G. Griffith and J. R. Steen. Honours : Second Class, P. G. Griffith and J. R. Steen.

Medical Degrees Examination.—Exhibition : First Class, James Jackson. Exhibitions : Second Class, R. W. Haslett and Charles Porter. Honours : First Class, James Jackson. Honours : Second Class, R. W. Haslett and Charles Porter.

Travelling Medical Scholarship.—Joseph Stewart.

PROFESSOR VON BERGMANN has been appointed Surgeon-General of the first-class *à la suite* of the Prussian Sanitary Corps, his diploma dating from June 8th, 1882, and his rank being that of a Major-General.

THE TAPEWORM IN SERVIA.—The tapeworm had become a general form of malady in Servia ; but much was done last year to get rid of this by careful sanitary precautions being taken by the veterinary staff in examining the swine and pork imported from other countries.

THE HEALTH CONGRESS AT HASTINGS.—On the 5th inst., in the Exhibition building connected with the recent Congress, Dr. Richardson presented the medals and certificates to the various successful exhibitors. The Mayor of Hastings and other local notabilities were present.

THE LATE MR. ALLEN, L.K.Q.C.P.I., OF LIVERPOOL.—At the last meeting of the Hospitals Committee of the Corporation a resolution was passed expressive of the great loss sustained by the death of Mr. Allen, resident medical officer at the Netherfield-road Hospital, who died on the 28th ult. from an attack of scarlet fever contracted in the course of his professional duties.

AFTER-CARE ASSOCIATION.—The annual meeting of this Association, for the benefit of poor and friendless female convalescents on leaving asylums for the insane, will take place at 83, Lancaster-gate, on Thursday, July 4th, at 3 P.M. The Earl of Meath will preside. Tickets of admission may be obtained from the secretary, Mr. H. Thornhill Roxley, Arden Lea, The Drive, Walthamstow.

OPEN SPACES.—The opening of a new recreation ground at Guildford, to commemorate the Queen's Jubilee, was performed by the mayor of the borough on Monday last. The ground, comprising six acres, is the gift of the Earl of Onslow. At Horncastle, Lincolnshire, steps have been taken to provide funds for acquiring a people's park and recreation ground for the town.

DOCTORS AND VACCINATION IN BELGRADE.—Medical practitioners at Belgrade, with the exception of those holding French or Austrian diplomas, are required to pass an examination before the Medical Board. A licence to practise in Germany also exempts the holder from the necessity of passing this examination, but a simple German University diploma is considered insufficient. Vaccination is compulsory, and there is very little small-pox in the city. In the event of an outbreak of this disease, the entire district is compelled to undergo revaccination.

IRISH MEDICAL ASSOCIATION.—The following office-bearers have been elected for the ensuing year :—President : A. H. Corley. Vice-Presidents : David Jacob, John Olpherts, W. Bennett, W. J. Nally. Council : Arthur H. Benson, J. Boyce, R. Browne, F. Carre, W. Carte, S. Chaplin, H. G. Croly, Albert Croly, W. Cummins, F. Davys, Kendal Franks, Edward Hamilton, W. Hepburn, A. H. Jacob, J. R. Kelly, J. D. Kelly, R. Kinkead, F. Mayberry, G. Mackesy, J. Martin, Austin Meldon, F. McDowel, G. Morrogh, J. Moloney, A. Nolan, J. Pollock, T. Purcell, W. T. Stoker, J. Tabuteau, W. Thomson, J. Usher, W. J. Wheeler. Hon. Sec. : J. Chapman. Hon. Treas. : H. Minchin.

RAILWAY OFFICIALS AND THEIR HOURS OF LABOUR. Last Sunday a meeting of guards and other railway *employés* was held, under the auspices of the Amalgamated Society of Railway Servants, at Darlington, to consider their present position respecting the hours' movement, including payment of Sunday duty. Resolutions were passed in favour of a reduction of hours, and pledging the meeting to use all legitimate means to effect such a necessary and reasonable reform ; also urging upon men belonging to all grades of the service the necessity of holding meetings at every railway centre for the purpose of organising and strengthening the ranks of the Amalgamated Society of Railway Servants.

CREMATION IN FRANCE.—Dr. Brouardel and the advocates of cremation in France have at length obtained the sanction of the French law for the innovation which they seek to make. At the Congress of Hygiene and Demography which is to be held in Paris on Aug. 4th and following days, with the permission of the French Minister of Commerce, a section forming a sort of special congress by itself will be devoted entirely to discussing matters relating to cremation. Among the subjects to be considered are the best method of burning corpses expeditiously and the most suitable kind of building for a crematorium. Not only medical men, therefore, but engineers and architects are invited to attend.

PUBLIC HEALTH MEDICAL SOCIETY.—The annual meeting of the Society will be held at the Holborn Restaurant, High Holborn, W.C., on June 19th, 1889, at 6.30 P.M. Amongst other business, the President will propose, on behalf of the Council, the following alteration in the rules :—"That the words 'The Council shall, at their first meeting, proceed to the election of a chairman,' be deleted from the rules." "That notice in writing of any amendment to recommendations of the Council be sent to the hon. secretary at least four days before the date of the general or special meeting of members at which such recommendations are to be considered." The annual dinner will be held at 7 P.M., under the presidency of Sir C. Cameron.

THE NORTH-EASTERN HOSPITAL FOR CHILDREN.—At the twenty-first annual meeting last week of this institution, situated in the Hackney-road, the report, which was adopted, stated that during the year the work of the hospital had been carried on without material interruption. The improvements in the building, which had now been completed, had been found to answer very satisfactorily. The finances of the hospital had also greatly improved, and it had been found possible to considerably reduce the loan obtained from the bankers. The deficit at the close of December of £2575 had been greatly reduced by several windfalls, including a donation of £1000 from a gentleman, who desired to remain anonymous. The in-patients during the twelvemonth numbered 709, being an increase of 55 as compared with the previous year.

HOSPITAL FOR CONSUMPTION.—The annual court of the governors of this charity was held at the hospital, Brompton, last week, the Earl of Derby, President, in the chair. The forty-eighth annual report stated that, owing to the main building remaining more or less closed until May, on account of improvements and alterations, the number of in-patients had been much smaller than usual. There were in the hospital on Dec. 31st, 1887, 139 ; in convalescent homes, at the expense of the hospital, 14 ; and there were admitted in 1888, 1631 ; total, 1784. The new out-patient cases had been 13,377, and the number of attendances 70,315. Whilst thankfully acknowledging the liberal support given, the committee invited continued help, as a sum of £19,000 in annual subscriptions was always needed to maintain the 321 beds in the hospital.

ROYAL METEOROLOGICAL SOCIETY.—At the ordinary meeting of the Society, to be held at 25, Great George-street, Westminster, on the 19th inst., at 7 P.M., the following papers will be read :—"The Climate of British North Borneo," by Mr. Robert H. Scott, F.R.S. "On the Variation of the Temperature of the Air in England during the period 1849 to 1888," by Mr. William Ellis. "Atlantic Weather and rapid Steamship Navigation," by Mr. Charles Harding. "Meteorological Phenomena observed during 1875-87 in the neighbourhood of Chelmsford," by Mr. Henry Corder. "Rainfall in China, and Meteorological Observations made at Ichang and South Cape in 1888," by W. Doberck, Ph.D. A communication will also be made on the recent thunderstorms, and a number of photographs of lightning exhibited.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—The following are the office-bearers for the ensuing session:—President: Wm. Crump Beatley, M.D. Vice-President: James Smith, M.D. Hon. Treasurer: H. S. Baumgartner, M.B., M.S. Hon. Secretary: Geo. Walter Ridley, M.B., M.R.C.S. Members of Committee: W. Galloway, L.R.C.P., J. A. Dodd, M.R.C.S., A. Mantle, M.D., G. A. Atkinson, M.D.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ARMSTRONG, L. H., B.A.Camb., M.R.C.S., has been appointed Medical Officer of the Bedale District of the Leyburn Union.

BATTERSBY, J. H., M.B., C.M.Ed., has been appointed House Surgeon to the Rotherham Hospital, vice H. Cropley, F.R.C.S., resigned.

CALCOTT, L. B., M.R.C.S., L.S.A., has been reappointed Medical Officer of Oundle Rural and Union Districts.

COOKE, ALBERT W., L.R.C.P., M.R.C.S., has been appointed Resident Obstetrical Officer to Charing-cross Hospital.

DOUTY, EDWARD H., M.A., M.R.C.S., L.R.C.P., has been appointed House Surgeon at the Middlesex Hospital.

GIDDINGS, GEO. T., M.D.Durh., has been appointed House Physician to the London Hospital.

HART, F. J. L., M.B., C.M.Edin., has been appointed Medical Officer of the Wansford District of the Stamford Union.

HUTCHINSON, H., L.S.A., L.M.Dub., has been appointed Out-door Medical Officer, Shoreditch Union, vice Rowe, resigned.

JOHNSTON, R. C., M.R.C.S., L.S.A., has been reappointed Medical Officer of Leckhampton.

KŒTLITZ, MAURICE, L.R.C.P. Lond., L.S.A., has been appointed Medical Officer of the Third District of the East Grinstead Union.

LAWSON, JOSEPH, M.B., L.R.C.S., L.M. Irel., has been reappointed Medical Officer of Hebden Bridge Union and Todmorden Rural Districts.

LILLEY, JAS. H., M.A., M.B.Camb., M.R.C.S., has been appointed Medical Officer of the City District and Workhouse Infirmary, Hereford Union.

LYON, A. C., M.D., M.B., C.M. Aberd., has been reappointed District Medical Officer, East Retford Union.

M'NABB, L. A., M.B., B.S.Durh., has been appointed Junior House Surgeon to the Royal Infirmary, Preston, Lancashire.

NORRIS, OLIVER, L.R.C.P., L.M. Irel., has been appointed Medical Officer of the Weaverthorpe District of the Driffield Union.

PEDLEY, S. EDWARD, L.R.C.P., M.R.C.S., L.D.S., has been appointed Anæsthetist to the National Dental Hospital, vice J. F. Silk, M.D. Lond., resigned.

PLATT, H. T., M.S., M.B. Durh., has been appointed Senior House Surgeon to the Preston Royal Infirmary, vice F. W. Collinson, M.B., C.M., resigned.

RICHARDS, JOHN, M.B. Edin., has been appointed House Surgeon to the Royal Alexandra Hospital for Sick Children, Brighton, vice J. A. Kempe, F.R.C.S. Lond., resigned.

RUTHERFORD, JOHN JAMES, M.D.St.And., L.R.C.P., L.M.Edin., has been appointed Medical Officer of Shipley, Yorkshire, vice Ellis, resigned.

SAPP, J. G. VICTOR, L.R.C.P., M.R.C.S., has been appointed House Physician to Charing-cross Hospital.

SPENCER, R. M., M.D. Toronto, L.R.C.P., L.R.C.S.Edin., has been appointed Medical Officer of the Buckland District of the Tavistock Union.

SUGARS, J. C., M.D., M.Ch. Irel., has been appointed Medical Officer and Public Vaccinator, Dungannon Dispensary District.

TRAVIS, G. L., M.R.C.S., has been appointed Medical Officer of the Weybunbury District of the Nantwich Union.

WALKER, ALEX. HOPE, L.R.C.P., M.R.C.S., has been appointed House Surgeon to Charing-cross Hospital.

WHEELER, HUMPHRY J., M.B., M.R.C.S., L.R.C.P., has been appointed Medical Officer and Public Vaccinator to the Second District of the Wycombe Union, vice F. H. Turner, M.R.C.S., L.S.A., resigned. Also Surgeon to the High Wycombe Cottage Hospital and Medical Officer to the High Wycombe Provident Dispensary, vice F. H. Turner, M.R.C.S., L.S.A., resigned.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

BRISTOL GENERAL HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, board, lodging, and washing.

CHARING-CROSS HOSPITAL.—Assistant Dispenser. Commencing salary £90 per annum. Also, Assistant Anæsthetist.

CHARLTON-UPON-MEDLOCK DISPENSARY, Manchester.—Resident House Surgeon. Salary £100 a year, with furnished rooms and attendance.

CHELSEA, BROMPTON, AND BELGRAVE DISPENSARY, 41, Sloane-square, S.W.—Physician.

CHILDREN'S HOSPITAL, PENDLEBURY.—Junior Resident Medical Officer. Salary £80 per annum, with board and residence.

CITY OF LIVERPOOL INFECTIOUS DISEASES HOSPITAL, Netherfield-road.—Resident Medical Officer. Salary £100 per annum (subject to a contribution of £5 per cent. to the superannuation fund), together with board, washing, and lodging at the hospital.

COUNTY CLARE INFIRMARY, Ennis.—Surgeon. Salary not exceeding £94 a year, with residence attached.

DERBYSHIRE GENERAL INFIRMARY.—House Surgeon, for six months. Board and washing. No salary, but a bonus of £10 is given.

GENERAL HOSPITAL, Birmingham.—Two Assistant House Surgeons, for six months. No salaries, but residence, board, and washing provided.

GENERAL HOSPITAL, Nottingham.—Senior Resident Medical Officer. Salary £120 for the first year, with an addition of £10 a year up to £150, with board, residence, and washing.

GRAVESEND HOSPITAL.—House Surgeon. Salary £80, with board and furnished apartments.

LIVERPOOL DISPENSARIES.—Head Surgeon. Salary after the rate of £200 per annum, and also an Assistant Surgeon at £80 per annum. Apartments, board, and attendance provided in each case.

ROYAL ALBERT HOSPITAL, Devonport.—Assistant House Surgeon for six months. No salary, but board, lodging, and washing.

ROYAL BERKS HOSPITAL, Reading.—Assistant House Surgeon for six months. Board and lodging will be provided.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, Charing-cross.—House Surgeon. Board and lodging in the hospital.

WILLITON UNION, Somerset.—Medical Officer and Public Vaccinator for the Stogursey District of the Union. Salary £80 per annum, with the extra fees for operations and services provided for by the Orders of the Local Government Board. Also Medical Officer of Health for the Eastern Division of the Union, at a salary of £50 per annum.

Births, Marriages, and Deaths.

BIRTHS.

FARNELL.—On June 6th, at The Goffs, Eastbourne, the wife of Henry D. Farnell, F.R.C.S., of a daughter.

HEWER.—On June 4th, at Brownswood-park, N., the wife of J. Langton Hewer, M.D., F.R.C.S., of a daughter.

HILLSTEAD.—On June 8th, at "Lechmere," 71, Upper Richmond-road, Putney, the wife of Herbert John Hillstead, M.B., of a daughter.

HUMPHREYS.—On June 7th, at 23, Taviton-street, Gordon-square, the wife of Charles Estyle Humphreys, M.D., of a daughter.

MOORE.—On May 17th, at Stony Hill, St. Andrew, Jamaica, the wife of York T. G. Moore, L.R.C.P.Ed., M.R.C.S., of a daughter.

PUCKLE.—On June 8th, at Streatham, Edinburgh (the residence of her father), the wife of Selwyn Hale Puckle, M.B., C.M., of Bishop's Castle, Shropshire, of a son.

WALKER.—On May 24th, at Dalston, Cumberland, the wife of Norman Walker, M.D. Ed., of a son.

MARRIAGES.

AUBREY—ARNOLD.—On June 11th, at St. Paul's, Haggerston, Henry Wentworth Windsor Aubrey, M.R.C.S., to Florence Mary Maud Arnold, daughter of the Rev. F. Arnold.

HERN—HERSCHELL.—On May 29th, at St. Mark's, Notting-hill, William Hern, M.R.C.S., L.D.S., of 18, Stratford-place, W., and Ealing (late of Ashburton, Devon), to Laura, younger daughter of the Rev. L. Herschell, of North Kensington. No cards.

SCHARFF—HUTTON.—On June 6th, at the Unitarian Church, St. Stephen's-green, Robert Francis Scharff, Ph.D., B.Sc., of Leeson-park, Dublin, to Alice, youngest daughter of Lucius O. Hutton, Esq., Fitzwilliam-place, Dublin.

SLAUGHTER—JEAKES.—On June 6th, at St. Peter's Church, Belsize-park, Charles H. Slaughter, R.N., of the Royal Naval Hospital, Haslar, and Farningham, Kent, to Edith, youngest daughter of the late Lieut.-Col. J. W. Jeakes, of Winchester Hall, Highgate.

SMELT—SIMKIN.—On June 5th, at Redmarley Parish Church, Frank Hayes, of Newent, Gloucestershire, Surgeon, youngest son of Thomas Smelt, of Old Trafford, Manchester, to Maud Mary Symes, eldest daughter of the late Wm. Simkin, of Hallaton, Leicestershire.

SMITH—CRAWSHAW.—On June 5th, at Highfield Chapel, Huddersfield, by the Rev. R. Bruce, M.A., D.D., John Anderson Smith, M.D. Lond., M.R.C.S., of London, son of T. R. Smith, of Hull, to Laura, third daughter of the late John Crawshaw, J.P., of Huddersfield.

THOMPSON—PARKER.—On June 5th, at Saxilby Parish Church, Lincolnshire, Maitland Thompson, M.R.C.S., L.R.C.P. Ed., of Metheringham, younger son of R. S. Thompson, J.P. for the county of Cumberland, to Mary Howard, elder daughter of John Parker of Ingleby.

WHITE—OHREN.—On June 8th, at St. Peter's Church, Elgin-avenue, London, W., John White, L.R.C.P. & S., of Grays, Essex, to Eliza Caroline (Lily) Ohren, youngest daughter of Aubrey Ohren, of Dublin.

DEATHS.

CHISHOLM.—On June 1st, in London, Alexander Bain Chisholm, M.D F.R.C.S., formerly of Wimpole-street, late of Worthing, aged 85.

DAVIES.—On June 7th, at 18, College-road, Brighton, Jenkin Davies, L.R.C.P. Lond., L.S.A., formerly of Clapham.

TEALE.—On June 9th, at the Ridding, Lower Bentham, Lancaster, Joseph Teale, M.R.C.S., L.S.A., aged 75.

TRAILL.—On June 8th, at Viewfield House, Arbroath, John Traill, F.R.C.S.Edin., aged 80.

WOOLDRIDGE.—On June 6th, at Trinity-square, S.E., Leonard Charles Wooldridge, M.D.Lond., D.Sc., M.R.C.P., Assistant Physician to Guy's Hospital, son of the late Leonard Wooldridge, M.B., of Overton, Hants, and son-in-law of Sir Edward Sieveking.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, June 13th, 1889.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
June 7	29·90	E.	71	65	122	80	59	·43	Overcast
,, 8	29·97	N.E.	58	56	74	61	55	..	Overcast
,, 9	29·73	N.E.	57	56	90	61	54	..	Overcast
,, 10	29·68	N.E.	51	50	73	54	50	·68	Raining
,, 11	29·79	E.	54	53	86	62	50	·49	Raining
,, 12	29·95	N.W.	58	55	84	67	54	·02	Overcast
,, 13	29·95	S.	62	59	78	65	57	..	Overcast

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET to be addressed "to the Publisher."

We cannot undertake to return MSS. not used.

WHO INVENTED SPECTACLES?

To this question an answer has been given by the Italians in favour of one of themselves. In Florence, in a little street, or *chiasso*, as it is called (corresponding to the Scottish "close"), between the Via Cerretani and the Medicean Chapel, a memorial tablet has been inserted in the façade of one of the houses, and bears the following inscription:—

Ad
Onorare la Memoria
di
Salvino degli Armati
Inventore degli Occhiali nel Secolo XIII.
La Fratellanza Artiziana
Qui dove furono
Le Case degli Armati
Pose questa Lapide
Il Giorno V. Luglio MDCCCLXXXV.

[To honour the memory of Salvino degli Armati, inventor of spectacles in the thirteenth century, the Guild of Artisans, on the spot once occupied by the houses of the Armati, placed this tablet, on the 5th day of July, 1885.]

Bacterium. — The results of the inquiry by Dr. Neill Macleod and Mr. Milles into the causation of Asiatic cholera were published in THE LANCET of March 2nd and 9th of the present year.

Quærist.—The question has been frequently answered in our columns (see THE LANCET of May 11th, p. 971).

Fides.—Yes, very shortly.

HÆMOSTATIC PROPERTIES OF SHEPHERD'S PURSE.

To the Editors of THE LANCET.

SIRS,—Dr. Wagner's observations on the hæmostatic properties of the capsules of shepherd's purse when made into a tincture (THE LANCET, June 8th, 1889, p. 1157) are confirmatory of the properties of the plant described by Dr. Caleb Threlkeld in his "Synopsis Stirpium Hibernicarum, Dublin, 1727," who, under the names of "bursa pastoris major, folio sinuato, shepherd's purse, pickpurse, and caseweed," says:—"It is cooling, incrassating, and good in all sorts of fluxes, spitting of blood, bloody urine, violent floodings. Nature sports wonderfully in the fashion of the leaves of this plant. It certainly cures a gonorrhœa, according to Simon Paul. I suppose he did not mean the virulent one, which is too stubborn for any one vegetable."

I am, Sirs, yours truly,

June 9th, 1889 A. S.

SCHEME FOR A PUBLIC MEDICAL SERVICE OF ENGLAND.

Dr. Robert Rentoul, of Liverpool, kindly sends us a communication, the length of which precludes its insertion in our columns, in development of a plan for providing in any given district medical treatment for those breadwinners who are earning from 20*s.* to 45*s.* per week for the entire family, on their making small immediate payments of 2*s.* for the first visit, 1*s.* for subsequent visits during the same illness, or 4*s.* per week paid in advance for five visits. The scheme would include those in domestic service, shop and factory hands, some clerks, mechanics, and shopkeepers—these being the classes who generally frequent and overcrowd the out-patient department of the medical charities. The scheme does not provide for medical treatment at the homes of wage-earners. It is meant to include all qualified practitioners, elected by a board which the scheme provides. It also aims at conciliating chemists by giving the prescribing to them at the rate of 4*d.* for each prescription, to be paid by the patient. Branch premises have to be established in each district at a rent of from £25 to £45. Our readers will form their own estimate of the feasibility of the plan. It seems to us of doubtful practicability. It would be sanguine to think that the out-patient classes would pay such sums, or that any large number of practitioners would part with their individual liberty as to methods of practice for the chances of election under a scheme which would involve so many partners and some pecuniary liability. We entirely agree with Dr. Rentoul as to the existing evils and the abuse of the out-patient department; but we cannot see that his proposition would be a solution of difficulties, and it is especially defective in that it entirely fails to deal with family sickness. The best hope of dealing with the working classes and curing them of hospital sickness is a scheme that will include good attention to their families.

Dr. Whittle (Brighton).—We do not see in what way we can make use of the facts communicated by our correspondent.

"DEGREES FOR QUALIFIED GENERAL PRACTITIONERS."

To the Editors of THE LANCET.

SIRS—The letter of "M.D.Brux., L.R.C.P.Lond.," in THE LANCET of June 8th, was evidently written under misapprehension of my statements. I do not wish to imply that the M.D.Brux. is an inferior degree; I simply assert that the public are inclined to laugh at the holder of all foreign degrees, and often imagine the holder of such not to be properly qualified, thus ignoring his English qualifications. The lines on which I would propose that Durham, St. Andrews, or Aberdeen should be memorialised are to request them to admit qualified men to their degree after examination in such subjects as they have not already passed in at the Colleges, but recognising those subjects in which they have already been examined at the Colleges, and which, according to the evidence before the Commission, are as difficult to pass in at the Colleges as at the ordinary M.D. examination. This or the present arrangement of the above-named Universities, without the present limit as to age, would help to remove a state of things which is a gross injustice, and generally admitted to be so.

I am, Sirs, yours truly,

June 9th, 1889. FAIR PLAY.

To the Editors of THE LANCET.

SIRS,—I beg to suggest that if the Senate of the Durham, Aberdeen, or St. Andrews Universities could be successfully petitioned to grant its M.D. degree, without residence, to practitioners under forty years of age who show a wider experience of general practice and more extended reading than is required for the L.R.C.P.Lond., none of their present graduates are likely to complain; for the standard of the degree would be raised rather than lowered. The fact mentioned by a correspondent in your issue of June 8th, that a similar petition was refused by the Durham University some years ago should not deter us from petitioning them again now that the requirements of the medical profession have been so clearly shown by the recent Commission.

I am, Sirs, yours faithfully,

Torpoint. SYDNEY G. VINTER, M.R.C.S., L.R.C.P.Lond.

M.B.Edin.—1. The examination includes passages for translation into English from Latin and German, and there are one or two questions set in the subjects of hygiene and psychology.—2. No, these subjects are not required. A good plan will be for our correspondent to apply to the College for copies of papers set at the examination.

Dr. Stewart will find the matter discussed in another column.

STILLICIDIUM URINÆ, &c.

To the Editors of THE LANCET.

SIRS,—I have under my care an obstinate case of the above in a female, with paralysis of the bladder, for which I have tried most of the usual remedies without much benefit. I shall therefore be glad of suggestions from the readers of THE LANCET. I may mention that I believe the cause of it is chiefly owing to the undue use of stimulants.

I am, Sirs, yours truly,

June, 1889. M.R.C.P.

DEATH CERTIFICATES.

W.—Under the provisions of the Friendly Societies Acts of 1875 and 1876 it is illegal for any registered society to pay any money on the death of a member without the production of a certificate of death issued by a Registration Officer, and for the purpose of these Acts the certificate of a medical practitioner is useless. With regard to the question whether a medical practitioner can legally charge for a medical certificate, we can only repeat the reply which, in these columns, we have from time to time frequently given. Section 20 of the Births and Deaths Registration Act, 1874, imposes upon all registered medical practitioners the duty of filling up and giving to some person "required by this Act to give information concerning the death, a certificate stating to the best of his knowledge and belief the cause of death" of any patient he has attended in his last illness. The Act makes no provision for any payment to the medical practitioner for this certificate, and in Section 39 imposes a penalty on "every person who refuses or fails without reasonable excuse to give or send any certificate in accordance with the provisions of the said Acts." While, therefore, there is no express provision in the Registration Acts against a charge being made for a medical certificate, there is no reason to believe that the non-payment of such charge would be held to be "a reasonable excuse" for refusing to supply the certificate in accordance with the provisions of the Act.

X. Y. Z.—On the supposition that the facts are fully given, we should reply to the question in the negative.

Dr. O'Neill (Lincoln).—The report will be acceptable.

"IN EVERY DEEP A DEEPER STILL."

To the Editors of THE LANCET.

SIRS,—I have just been told that a few weeks back an anonymous correspondent wrote a letter to THE LANCET *re* advertising this practice. I must ask you to insert my letter or some portion of it. The circulars that he speaks of were distributed about the neighbourhood without my knowledge or consent, before I bought the practice (some three weeks now). Personally I strongly disapprove of anything savouring of "advertising," and nothing of the kind has been done since I bought the practice; but, at the same time, your correspondent must know as well as I do now that most of the East-end practitioners do send circulars with their prices or fees on them—so much so that I have had two left at my own house, not at patients' houses, as in your correspondent's case. There is a very large class of patients in this neighbourhood—probably the bulk of your correspondent's practice—who are able to pay from 6*d.* to 1*s.* for medicine, and *pro rata* for attendance and visits, who could not pay more, and who would go to the London Hospital if there were not dispensaries where they can be attended to for the above fees. Of course, they have to attend during certain hours. I think your correspondent would have done better to have found out more particulars before writing to you. He complains of 10*s.* 6*d.* fees for confinements. Well, as I said before, I did not authorise, and am not responsible for, the fees stated in the circulars. So far I have not had a confinement at 10*s.* 6*d.*; and though I certainly will attend poor cases for half a guinea, it is only because I am convinced that in many cases it is all they can afford, and also that if I do not every other, or practically every other, practitioner in the neighbourhood will do so, and so I should in that case lose the family altogether. Your correspondent evidently ought to practise in Harley-street, for he seems to be accustomed to ten-guinea fees; he ought not to practise down here. I am not condoning or excusing the fact of the circulars being distributed round. It was done before I came here, without my knowledge or consent, and was stopped the moment I knew of it. I do not often see THE LANCET, which accounts for my not hearing of this before. As you have specified my address, I must request you to print my letter in your next issue. I had nothing to do with the practice prior to four weeks ago, had never even heard of it six weeks ago, and therefore am not responsible for anything that my predecessor did or caused to be done, in my opinion, simply to increase the apparent value of the practice, and so sell it at better terms.

I am, Sirs, truly yours,

LEWIS H. BROWN, M.R.C.S.Eng., L.R.C.P.Lond.

Mile End-road, June 10th, 1889.

Colonial.—In the ordinary course of things, the Medical Council will not meet again till the fourth Tuesday in November.

G. P. R. had better write to the Secretary of the College.

DEVELOPMENT OF TEETH IN ADULT LIFE.

To the Editors of THE LANCET.

SIRS,—The following case may be interesting to those of your readers who may be curious about the growth of teeth after puberty.

About thirty years ago I knew a gentleman who at the age of fifty and upwards developed six teeth in the roof of the mouth. They were arranged behind the permanent teeth at about an eighth of an inch distant, and about a quarter of an inch apart, and apparently were all incisors. I am, Sirs, yours truly,

Neath, June 8th, 1889. JOHN RUSSELL.

NEW MEDICAL ATTENDANCE EXPERIMENTS.

THE following letter describes a new venture, one striking feature of which is the payment of a premium of £100 by the applicant for an appointment. The other features are more complicated and difficult to trace. We should be glad of information on the working of this scheme from any who have tried it. We should like to know how the Society gets patients, and at whose expense.

"National and Provincial Friendly Society,
"Chief Offices: 57 and 58, Chancery-lane, and
"11 and 12, Southampton-buildings,
"London, W.C., May 28th, 1889.

"*Re* Medical Examiners.

"DEAR SIR,—In answer to yours, I beg to give you the following particulars.

"The appointment is to the above new friendly society, which has all the usual friendly society provisions, plus medical aid in sickness and accident. Your duties would be (1) to examine all candidates for life assurance in your district for policies of £25 and upwards, (2) to attend upon all sick patients belonging to the Society in your district, and (3) to attend and report to the office upon all accidents to patients belonging to the Society in your district. The remuneration of £100 per annum (payable quarterly) covers all these duties, unless you have more than 300 cases in the year, in which event the salary will be increased at the rate of £10 per each additional fifty, and *pro rata*. This does not include medicine, and special fees would also be allowed for special attendances, or services specially ordered by the office. £100 is required, as stated in advertisement, and is payable as follows:—£10 on sending in your application, accompanied by copies of two recent testimonials or references. This money, of course, to be returned should you fail to be appointed. £20 on the agreement between you and the Society being signed, and the balance of £70 may be spread over four successive quarterly payments of £17 10*s.*

"Awaiting your favour, "I am, yours faithfully,

"S. F. GANDELL, Secretary."

REMITTENT CRAMP.

To the Editors of THE LANCET.

SIRS,—The letter of Mr. Leslie Train, on the above subject, reminds me of a case which occurred in my practice, some thirty-five years ago, in Wiltshire. An old man walked some miles to my surgery in quest of a remedy for what he termed "rheumatiz," from which he had suffered for some thirty years. Finding that it only affected one leg, showed itself as a sudden severe spasm which nearly threw him down when walking fast or jumping, and discovering a tender spot over the anterior tibial nerve in the lower third of the leg, I proposed, and he submitted, to an operation. Exposing the nerve at that spot, I found it bulbous, and, in the adjoining fascia, firmly embedded but movable with the tibialis anticus muscle and the extensor proprius pollicis muscle (and then acting on the thickened portion of the nerve) was a sharp black point. On extraction this proved to be a small black thorn of a quarter of an inch in length. I brought the wound together, and the man walked home; and, while I was in the old country, complained no more of his "rheumatiz." Shortly after the operation he told me that he remembered when "hedging," some thirty years previously, that he had been wounded by a thorn, but thought it had been wholly removed. I am, Sirs, yours faithfully,

Trinidad, W.I., May 20th, 1889. ROBERT KNAGGS.

MACKEREL POISONING.

To the Editors of THE LANCET.

SIRS,—Referring to your note on mackerel poisoning, it may possibly interest some of your readers to know that fishermen have a saying that white mackerel is the best, then green, but that the red variety is the poisonous. In Guadaloupe there is a red boned mackerel used as a rat poison. There are known and noted already upwards of seventy different kinds of food fishes, which within a few hours after their death are reported to undergo such decomposition in their bodies or flesh as to give rise to poisonous symptoms after being eaten by man. So convinced is the Russian Government of the importance of this question that it offers in 1894 a prize of 5000 roubles (say, £500) for the best essay on the nature and cure of fish poisoning. None of the fish found in the Norwegian waters are poisonous. It has been stated that all living healthy fish swarm with bacteria in their blood and lymph, which bears out my own observations regarding the early and rapid rate of decomposition of even freshly caught fish. Hence I have long advocated that fish on capture should be immediately bled and gutted. The bleeding must, of course, take place before clotting; but British fishermen and fishmongers only gut their fish after clotting has taken place.

I am, Sirs, your obedient servant,

Folkestone, June 8th, 1889. J. LAWRENCE-HAMILTON, M.R.C.S.

Tyro.—Full information on the several points mentioned by our correspondent will be found in our Students' Number, published in September last.

G. P.—Post-graduate courses are now existent in connexion with eight of the London hospitals.

VOYAGES FOR INEBRIATES.

W. H. C. asks if there are temperance ships going long voyages, on board of which a confirmed inebriate could go as a passenger.

ERRATUM.—In the article by Dr. Collins, published last week, p. 1130, col. 1, lines 2 and 3 from bottom, for "Beaugency" read *Bordeaux*.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Andrew, London; Sir W. Dalby, London; Mr. Counsell, Lyss; Dr. Prance, Plymouth; Dr. Clement Dukes, Rugby; Mr. Thomlinson, Swansea; Mr. Cheatle, London; Dr. O'Neill, Lincoln; Dr. T. W. Hime, Bradford; Dr. Russell Steele, Hemel Hempstead; Mr. Barnardo; Dr. R. Rentoul, Liverpool; Dr. Wetherell, Barnsley; Dr. Leclercq, Carlsbad; Dr. Belcher, Gloucester; Mr. J. Russell, Neath; Mr. B. Roth, London; Mr. R. Knaggs, Trinidad; Dr. Swan, Gilford; Dr. Beavan Rake, Trinidad; Mr. Laurence-Hamilton, Folkestone; Mr. Berkeley Hill, London; Mr. Oldham, Burton-on-Trent; Messrs. Hewlett and Son, London; Dr. Tuckey, London; Mr. H. de Styrap; Dr. Sydney Phillips, London; Dr. Collins, London; Mr. T. Christie; Mr. Henry Thompson, Hull; Dr. Woodhouse, Putney; Dr. Dalgleish, Reading; Mr. L. H. Brown, London; Dr. Chalmers, Mossend; Mr. A. E. Hind, St. Heliers; Dr. Whittle, Brighton; Mr. Vinter, Torpoint; Mr. Roxby, Walthamstow; Mr. Sandell, London; Mr. Davidson, Congleton; Mr. Cooke, London; Mr. Williamson, Horley; Dr. Withers, Shrewsbury; Mr. Coates, London; Mr. Hodgson, London; Mr. Milson, Hampstead; Mr. Richards, Cardiff; Medicus; M.B., M.R.C.S.; Huberto; Inquirer; A., London; M.R.C.P.; Manchester Royal Eye Hospital; A. S.; Fair Play; G. P., London; M.B. Edin.; Birmingham General Hospital; Donovan, London; Achilles, London; Derbyshire Infirmary; Lincs., London; Wilton, London; Colonial; Graduate, London; Scotus, London; H. B. R., London; W. H. C.; A. N. V., Berks; G. W. R., Accrington.

LETTERS, *each with enclosure*, are also acknowledged from—M. Berthier, Paris; Mr. Davies, U.S.A.; Mr. Collier, London; Messrs. Butterfield and Son, Northampton; Mr. Oldham, Liverpool; Mr. James, Port Talbot; Mr. Crassweller, London; Mr. Sharpland; Messrs. Roberts and Co., London; Dr. Walker, Cumberland; Mr. Carvalds, Hong Kong; Mr. Edwards, Faversham; Dr. Duke, Chislehurst; Mr. Millar, London; Mr. Coulson, Birmingham; Dr. Smith, Halifax; Mr. Ewart, Grimsby; Dr. Branthwaite, Rickmansworth; Messrs. Porteous and Co., Glasgow; Dr. Hewett, St. Leonards; Mr. Cochrane, Broadford; Mr. Worsley, St. Leonards; Dr. Humphreys, London; Mr. Ladd, Canterbury; Mr. Topping, London; Mr. Northey, Devon; Mr. Davies, Llandovery; Messrs. Warren and Co., Bristol; Mr. Heywood, Manchester; Mr. Thorpe, Sheffield; Bonâ Fide, London; Medicus, Hull; H., London; Alpha, London; J. F. R.; Delta, London; Gloucester County Asylum; Saccharilstum, London; Surgeon, Lancs.; Sussex County Hospital; Matron, Pendlebury; Florence, Yorks.; Swansea Hospital; Applicant, London; G. H. H., Birmingham; Hampshire Nurses' Institute; Superintendent, Newcastle; Liverpool Northern Hospital; A. B., London; Medicus, London; Digamma; East Suffolk Hospital; X. Z., London; Beta, London; L.S.A., Birmingham.

Daily British Columbian, Weekly Free Press and Aberdeen Herald, Daily Telegraph, Mining Journal, Reading Mercury, Hertfordshire Mercury, Pontypool Free Press, Surrey Advertiser, South Wales Daily News, &c., have been received.

Medical Diary for the ensuing Week.

Monday, June 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.
CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30
ST. MARK'S HOSPITAL.—Operations, 2.30 P.M.; Tuesday, 2.30 P.M.
HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Matthew Berkeley Hill: On some Affections of the Genito-Urinary Organs.

Tuesday, June 18.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.
CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 2.30 P.M.
ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M. Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same days, 2 P.M.

Wednesday, June 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.
LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.
GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.
ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.
KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M. Saturday, 1 P.M.
CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M.; Surgical visits on Wednesday and Saturday at 9.15 A.M.
COLLEGE OF STATE MEDICINE.—4 P.M. Surgeon-Major J. Lane Notter: Food, and its Relation to Active Work.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Matthew Berkeley Hill: On some Affections of the Genito-Urinary Organs.

Thursday, June 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF PHYSICIANS.—5 P.M. Dr. Lauder Brunton: On the Connexion between Chemical Constitution and Physiological Action. (Croonian Lecture.)

Friday, June 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
ROYAL COLLEGE OF SURGEONS OF ENGLAND.—5 P.M. Prof. Matthew Berkeley Hill: On some Affections of the Genito-Urinary Organs.
THE SANITARY INSTITUTE.—5 P.M. Mr. R. Brudenell Carter: Some Considerations on Ocular Hygiene.

Saturday, June 22.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

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